

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

Stories of the Week
Gags of the Week
Verse of the Week
A Humble Parable
Financial Facts

Stories of the Week

Three times a day Miss Maude, long-suffering kindergarten teacher, removed and wrestled on again 27 pairs of galoshes.

"These hain't mine," mused Dresden-doll Patricia, after Miss Maude had struggled them onto Patricia's tootsies.

Resignedly teacher waggled off the galoshes.

"They're my brother's," Patricia waited until then to explain.

Grand opera composer Verdi felt fine when first he heard that he would be honored with a life-size statue in a Roma plazzo.

"And it will cost 10 million lira," he was informed.

"Merciful Mother!" he exclaimed. "For five million I'd stand on the pedestal myself."

Gags of the Week

Atomic bombs, we hear, now come in three sizes:

- (1) Gigantic
- (2) Unbelievable
- (3) Where is anybody?

After a trip to Reno a woman feels like a new man.

Verse of the Week

Age is a quality of mind . . .
If you have left your dreams behind,
If hope is lost,
If you no longer look ahead,
If your ambitions' fires are dead . . .
Then you are old.
But if from life you take the best,
And if in life you keep the jest,
If love you hold . . .
No matter how the years go by,
No matter how the birthdays fly,
You are not old!

A Humble Parable

Bet you'll like this emanation from the American Hotel Association:

Like the tired American businessman, Ivan felt he needed a change from the discipline and restrictions of everyday life—even if it was only a business trip. But Ivan, alas, is not an American businessman. He is a second class functionary behind the Iron Curtain so, first, he has to prove that his trip is in the interest of the State. Otherwise, he could be picked up for treasonable activities. The next step, though he will not be crossing any borders, is a police stamp on his 20-page passport, a personal history which lists even the names of his in-laws. Ivan can't even call a terminal for his own tickets. His trip is pre-controlled from start to finish.

Ivan has a light blue hotel card. Only Party bigwigs get the white cards which let them in luxury hotels and provide champagne and caviar for their tables. Ivan's hotel room is graded to his position in the hierarchy. A broken spring pokes through the gray-white sheet. His floor is not painted but tarred and then greased with black machine oil. But Ivan has lived all his life with shortages and makeshifts. Now, he's interested in making the most of his unaccustomed freedom.

Bill, the tired American busi-
(Concluded on Page 10, Col. 3)

ISSUED EVERY MONDAY AT 436 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.

AIR CONDITIONING & REFRIGERATION News
THE NEWSPAPER OF THE INDUSTRY

Vol. 74, No. 3, Serial No. 1,348 **January 17, 1955** Subscription Price, \$6 Per Year

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879.
Trade Mark Registered U. S. Patent Office. Copyright 1955, by Business News Publishing Co.

N.Y. To Issue No More Emergency Parking Cards for Servicemen

NEW YORK CITY—No more "Emergency Repair Service Parking Cards" will be issued to refrigeration and oil burner servicemen after the present permits expire Feb. 28, according to New York City Police Commissioner Francis W. H. Adams.

A total of 654 such "emergency parking" cards were issued last year. All expire Feb. 28.

What the reaction of servicemen groups to the order will be has not yet been made known, but they fought hard to get the card privileges, and may be expected to put up a battle to keep them. However, the New York police department is embarked on a big drive on the city's parking problem, and is adopting some stringent measures.

Commissioner Adams said that improvements in mechanisms had reduced the safety hazards so emergency cards no longer were necessary.

"Refrigerators now use a new and non-toxic type of refrigerant, and safety valves and emergency cut-off switches have reduced hazard from oil burners," he explained.

Sub-Zero Shows 10 All-Aluminum Upright Freezers

MADISON, Wis.—A new line of all-aluminum upright freezers designed in conjunction with Brook Stevens was introduced to its distributors and dealers here recently by the Sub-Zero Freezer Co., Inc.

The line contains 10 models ranging in size from 12 to 192 cu. ft. in both reach-in and walk-in styles.

The all aluminum exteriors are finished in white baked-on enamel while interiors are stucco embossed aluminum. "Cold Saver" inner compartment doors help reduce cold loss. Refrigerating coils
(Concluded on Page 4, Col. 1)

Dealers Told 'Turning Point at Hand' In Fight Against Cut-Price Selling

By **John O. Sweet**

CHICAGO — Optimistic appraisals of the outlook for the appliance industry marked a number of talks presented last week before a record turnout of retailers at the annual convention of the National Appliance & Radio-TV Dealers Association.

But speakers stressed that creative selling will be required in 1955 to take advantage of the sales opportunities.

During three days of meetings at the Conrad Hilton hotel here, dealers also got some advice on the discount house problem, heard a suggestion that manufacturers should eliminate prices from national advertising, and were urged to sell complete kitchens.

H. B. Price, Jr., Norfolk, Va., was re-elected president of NARDA. He was elected to the post last fall to fill the unexpired

U. S. Fights Court Ruling Allowing Warranty Costs

WASHINGTON, D. C., Jan. 12—The U. S. Department of Justice has appealed to the Supreme Court to review a tax claim award to General Motors Corp. that might result in millions of dollars in tax savings every year to manufacturers who offer warranties on refrigerators and other products at a flat price.

The case grew out of a \$537,886 excise tax deficiency charged to General Motors by the Internal Revenue Bureau in 1943. The claim was based on General Motors' failure to pay excise taxes from 1937 to 1941 on \$5 warranty charges which were collected from purchasers of Frigidaire refrigerators.

General Motors contended the warranty was not a part of the price of its refrigerators and therefore was not taxable, but paid the tax bill under protest. The corpora-
(Concluded on Back Page, Col. 2)

Air Conditioned Village To Be NAHB Topic

CHICAGO—A first-hand report of what has been learned so far in the air conditioned village in Austin, Texas will be made at the National Association of Home Builders convention here this week.

Ned A. Cole, Austin builder, will lead the discussion at a meeting scheduled for 10 a.m., Wednesday, Jan. 19, at the Conrad Hilton hotel.

Other participants include William Nessel, chairman of the field investigation committee of the National Warm Air Association; George Jones, executive director of the Air-Conditioning & Refrigeration Institute; Frank Parsons, engineer for the National Mineral Wool Association; and builders Harold D. Sarshik of Haddonfield, N. J., and E. L. Fausett of Little Rock, Ark.

A preliminary program issued by the NAHB said about the dis-
(Concluded on Page 4, Col. 4)

Norge Plan Gives Dealers Extra 2% In Next 6 Months

CHICAGO—A plan which pays dealers an additional 2% profit on every Norge appliance purchased from their authorized distributor between Jan. 1 and June 30, 1955, was disclosed by Judson S. Sayre, president of Norge Div. of Borg-Warner Corp. at the company's distributor convention here recently.

Under the plan, Norge will save for the dealer's account 2% of the cost of each Norge appliance purchased and will pay it in one check shortly after June 30, Sayre said. The 2% profit is above and beyond the regular profit margin.

The distributor convention also got the first look at the new 1955 line of Norge refrigerators, freezers, and ranges, all with features to reflect the "frozen food age," ac-
(Concluded on Page 29, Col. 1)

Tecumseh Showing New Hermetic Units Through 5-Hp. Size

TECUMSEH, Mich.—Ready for introduction at the Heating & Ventilating Exposition is a new line of Tecumseh Products Co. compressors for application in room air conditioners and year-round residential air conditioning systems.

The new line includes air-cooled and water-cooled hermetic compressors adaptable for year-round or "add-on" applications from 1½-hp. to 5-hp., and 2-hp. and 3-hp. air-cooled highspeeds. The new line of compressors for room air conditioners ranges from ¾ hp. to 1½ hp.

Heading the new line is the newly-designed 5-hp. full hermet-
(Concluded on Back Page, Col. 1)

Sales of 589,921 Appliances Reported By Kelvinator Div.

DETROIT — Despite two prolonged strikes in the Detroit plant during the 1954 fiscal year, Kelvinator Appliances Div. of American Motors Corp. produced 589,921 household and commercial appliances as compared with 638,204 in 1953, George Romney, president of the corporation, declared in the
(Concluded on Page 4, Col. 5)

Over 400 Firms In Philadelphia Show Jan. 24-28

New Air Conditioning
Lines Will Bow; ASHAE
Meets at Same Time

PHILADELPHIA — With more than 400 firms exhibiting their 1955 models of commercial and home heating and air conditioning systems and components, the International Heating & Ventilating Exposition will open next Monday, Jan. 24, at the Commercial Museum here, and continue through Friday, Jan. 28.

At the same time the 61st annual meeting of the professional society known for 60 years as the American Society of Heating & Ventilating Engineers, and the first meeting held under its new name—American Society of Heating and Air-Conditioning Engineers—will get under way at the Bellevue-Stratford hotel. The society's sessions will continue through Thursday.

(Concluded on Back Page, Col. 3)

New Unarco Unit Can Be Equipped With Heating Coil

CHICAGO—A completely re-designed, re-engineered, water-cooled packaged air conditioner has been announced for 1955 by Union Asbestos & Rubber Co.

The new Unarco unit, to be known as the "Royal-Aire," can also be equipped with a heating coil.

Chester S. Stackpole, general sales manager of the company's Heating and Cooling Div., pointed out that the "Royal-Aire" has a pump-down control system.

"This is a very important 'extra' we have added on all standard models," he said. "While more costly to build, it insures that a minimum of gas remains at low
(Concluded on Page 4, Col. 4)

Wall Heads Servel Self-Contained Home Appliance Division

EVANSVILLE, Ind. — John H. Wall, an Evansville industrial executive since 1931, has been ap-
pointed general manager of Servel's newly-created self-contained home appliance division, Louis Ruthenberg, board chairman of Servel, Inc., and Duncan C. Menzies, president, announced recently.



John H. Wall

Wall is expected to be elected a
(Concluded on Page 4, Col. 3)

DON'T MISS . . .

The Miami Story Report on Business Methods and Conditions in One of America's Largest Air Conditioning Markets	6
What Was New at the Marts Pictures of New Products Shown in Chicago	11
What Was New in Room Air Conditioners 12 Room Air Conditioners Photographed at the Marts	13
Balancing Refrigeration System Proper Selection of Flow Control Devices Can Be a Big Aid, Says Schenk of Alco	20
Cooling Rambling Ranch-Type Home 4-Zone System Provides Economical Conditioning	24

. . . In This Issue

Outdoor Milk Vendors Win Approval Of Buffalo Health Commissioner

BUFFALO — For the second time in two weeks, Health Commissioner Berwyn F. Mattison advised the Common Council his department can find no objection from a health standpoint to selling milk in outdoor vending machines. He reported department inspectors have continued to check 13 such machines, four in Buffalo and the remainder in the county.

He added that inspectors found the interior of the machines clean, extremely cold, and protected against the entrance of flies. He said: "From a health viewpoint, it

would seem we should encourage rather than discourage a wider distribution and consumption of milk."

The Council requested a Health Dept. opinion after the Delicatessen Owners Association protested the machines, unless licensed, would put retail outlets at a competitive disadvantage.

Since the initial protest, The AFL Milk Drivers Union has appeared before the Council to oppose the vending machines, contending the machines will put drivers out of work.

Third National Air Pollution Symposium Scheduled To Be Held In Pasadena, Calif. April 18 to 20

PALO ALTO, Calif.—A third day has been added to the program of the Third National Air Pollution Symposium originally announced for April 18-19.

The meeting will be held April 18 through 20 at the Huntington-Sheraton hotel, Pasadena. It is expected to draw participation from international scientific and industrial interests in the field of air pollution.

Co-sponsoring the symposium with Stanford Research Institute are California Institute of Tech-

nology, University of Southern California, University of California at Los Angeles, Southern California Air Pollution Foundation, and the Air Pollution Control Association of Pittsburgh, Pa.

The program will include sessions on "General Aspects of Air Pollution," "Analytical Techniques and Instrumentation," "Physiological Effects of Air Pollution on Plants," "Physiological Effects of Air Pollution on Animals," and "Legal Aspects of Air Pollution."

Shopping Center Gets 463 Tons of Cooling— Central and Packaged

MINNEAPOLIS — A total of 463.5 tons of air conditioning is being installed in the new Knollwood Plaza Shopping Center in St. Louis Park, a Minneapolis suburb, the Worthington Corp. announced recently.

Worthington central and packaged equipment will serve 17 of the largest stores in the center, the company said. These include Powers Dept. Store, Sears Roebuck & Co., F. W. Woolworth, J. C. Penny, Walgreen Drug, Three Sisters, Harold Inc., Maurice R. Rothchild, Berlends Shoes, Kinney Shoes, Red Owl Supermarket, and Richmond Bros.

Equipment to be installed includes a 255-ton model 55-C-24 centrifugal refrigeration unit, three 4JF4-100 compressor units with 40-hp. motors, and one of the same model equipped with a 30-hp. motor.

Also to be installed are 20 packaged air conditioners with a total capacity of 208.5 tons. These include two SCY-42's, six SCY-62's, one SCY-82, four SCY-1042's, four SCY-1552's, two RCY-2002's, and one RCY-2502.

Spencer Air Conditioning Co. of Minneapolis is the Worthington dealer handling the installation, according to the announcement.

Sales by Refrigeration, Air Conditioning Distributors for Nov. 28% above Nov., 1953

WASHINGTON, D. C.—Sales by air conditioning and commercial refrigeration equipment distributors for November were 28% higher than in November, 1953, the U. S. Bureau of the Census reported recently.

This was one of the largest gains reported by any group of distributors, the Census Bureau said, following only lumber and millwork wholesalers and steel scrap dealers, both of whom reported a 36% gain over 1953.

Sales for the first 11 months of the year were 11% higher than

the 1953 period, though November sales were 3% below October. Inventories were down 4% from the preceding November and 1% under October.

Distributors of electrical appliances, TV and radio sets and parts, and electronic parts registered a 9% gain over November, 1953, and held even with October, 1954. For the first 11 months of the year, their sales were down 7% from 1953.

Inventories for this group were equal to those of November, 1953, and 3% smaller than in October.

C. A. Swanson Warns Frozen Food Dealers Following Poisonings

NEW YORK CITY — Food poisoning incidents in Dade County, Fla. attributed—possibly wrongly—to Swanson chicken dinners have inspired C. A. Swanson & Sons to try informative advertising on care of frozen foods.

Swanson, in a statement to the National Wholesale Frozen Food Distributors here, indicated that during a special two or three for the price of one sale, some grocers stacked the frozen dinners in the aisle outside the freezer cabinets and were careless about defrosting.

He indicated that this may have caused some customers to be equally careless at home. However, he contends that it never was proved that a single person was made ill by a Swanson dinner.

At the time of the sale, about a dozen people were taken ill by food poisoning and the Dade County health commission fixed the blame on organisms in the au gratin sauce used in the dinner.

The frozen food distributors indicated that this incident offered further incentive for the industry to educate food handlers to maintain zero temperatures.

Sutton Cuts Prices on Vornado Conditioners

WICHITA, Kan.—Suggested list prices on Vornado air conditioners have been cut from \$30 to \$60, the O. A. Sutton Corp. announced recently.

Biggest reduction is in the 1½-hp. model, now priced at \$499.95, according to Fred Kath, consumer products division sales manager.

New list prices range from \$289.95 for the ½-hp. model to \$599.95 for the new 2-hp. window unit.

Increased sales volume and more efficient production methods that reduced manufacturing costs brought about the price cuts, Kath said.

Firestone Stores To Sell Mitchell Air Conditioners

CHICAGO — Firestone Tire & Rubber Co. will handle Mitchell room air conditioners exclusively in its retail stores, it was announced by Bernard A. Mitchell, president of Mitchell Mfg. Co.

Firestone, which for the past three years has sold air conditioners under its own label as well as other nationally-distributed brands, will discontinue its own model and drop other lines.



only
J-E
SOLENOID VALVES

**require only one Coil Assembly
for every valve capacity**
Save you time and money on any job

All J-E Solenoids are unconditionally guaranteed for 18 months

- **TIGHT SEATING**—no bubble tolerance.
- **SIMPLICITY**—only two moving parts.
- **LONG LIFE**—cool coils.
- **DURABILITY**—all corrosion-resistant material.
- **OPENING PRESSURE DIFFERENTIAL**—higher than most others on the market.

Complete interchangeability of the coil assembly is another exclusive feature of the J-E line of Solenoid Valves. Regardless of valve size, from 3 to 400 tons of refrigeration, you need only

- One Coil
- One Coil Sleeve
- One Coil Plate
- One Housing
- One Plunger

Being able to interchange coil assemblies saves you time and money, eliminates confusion and delay on every job. Other important J-E advantages include quiet operation, freedom from clogging and their amazingly simple design with only two moving parts.

For complete information on why J-E Solenoid Valves are first choice of the country's leading manufacturers of refrigeration and air conditioning systems, call your wholesaler or write direct today.



SOLENOID VALVES THAT SURPASS THEIR SPECIFICATIONS
JACKES-EVANS MANUFACTURING COMPANY
Controls Division: 4427 Geraldine Avenue • St. Louis 15, Missouri

Servicemen! Engineers!

Get your FREE Copy!

NEW CATALOG
of **OFN**
DRIERS, FILTERS, STRAINERS and ACCESSORIES
for the Refrigeration and Air Conditioning Industries

12 pages packed with up-to-the-minute data on the most complete line on the market

- **New Drier design**
- **New Filter sizes**
- **New Selection Chart**—easy-to-read, accurate way to select cartridge type driers up to 100 tons.
- **Additional Accessories**—Charging Lines—Water Bubbler—Water Glass—Fillers—Water Regulating Valves—Hose for pull-out compartments—Vibration Absorbers.
- **Get this valuable Catalog for handy reference on latest dimensions, capacities and on-the-job information.**

ASK YOUR WHOLESALE — OR WRITE US
THE MCTIRE COMPANY • Livingston 11, N.J.

OFN
Since 1925 **DRIERS • FILTERS • STRAINERS**

The biggest news in the air conditioning business is happening right now at York!

Great things are happening at York! . . . important developments that are now making Big News for air conditioning dealers.

Here are the facts:

To serve you better, York Corporation has set up two complete and independent divisions—Commercial and Industrial. Under the new organization, York's Commercial Division will devote full time and energy to air conditioning and refrigeration packages for the York Distributor-Dealer family. This is important news because more than ever before, York is deeply and directly in the "appliance" business.

To support these new steps, the York Commercial Division has an advanced new Research and Development Laboratory and expanded manufacturing facilities. And you'll soon see that York's program to help Distributors and Dealers sell has a new look—has been given plenty of elbow room!

Powerful new merchandising plans to help you sell in 1955 are all mapped out, starting with the finest line of air conditioning units the people of York, Pennsylvania, have ever produced.

News about this exciting York line will be announced to millions of homes throughout the country in the biggest, most aggressive, concentrated campaign in York's history.

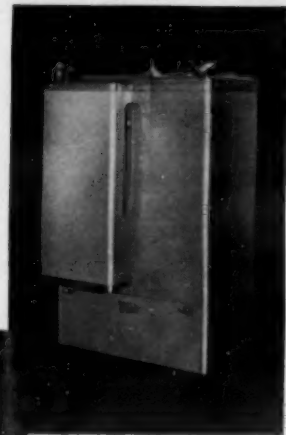
As you know, York was the first to develop a commercially successful Room Air Conditioner . . . first to introduce the completely hermetically sealed cooling circuit in large commercial air conditioners . . . first to find a practical way to apply the "Heat Pump" principle to room units . . . first in technical superiority every year in every phase of refrigeration and air conditioning!

Now, with a powerful new strategy to push sales of the nation's finest line of air conditioning appliances, 1955 will be another year when York takes the lead.

The management skill that made York the "quality name in air conditioning" is making York the "biggest-selling line in air conditioning."

You can get into position to capitalize on these events if you act now! Get an early start by using this coupon today!

The 1955 YORKAIRE Year-Round Residential Air Conditioner—a "best-seller" to expand a big market for you—fast!



The 1955 YORKAIRE Room Conditioner Model C-75 has features which have made YORK the most wanted air conditioner.



YORK CORPORATION, York, Pennsylvania
Commercial Division

Please send me complete information on the merchandising plans and products checked:

Yorkaire Room Conditioners ☐ Unit Coolers ☐
Yorkaire Store Conditioners ☐ Flake Ice Makers ☐
Automatic Ice Cube Maker ☐ Condensing Units ☐
Yorkaire Residential Air Conditioners ☐

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____

ZONE _____

STATE _____



YORK CORPORATION
the quality name in air conditioning and refrigeration

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



SUB-ZERO FREEZER CO.'s new 19-cu. ft. upright freezer featuring door shelves and inner "Cold-Saver" doors for each interior shelf is flanked by A. H. Rose (l.) Sub-Zero's general sales manager, and Quint Swiggum, factory representative.

Sub-Zero Upright Freezer Line--

(Concluded from Page 1, Col. 2) are in top, bottom, and all shelves.

High density Fiberglas insulation is 4 in. thick in top, bottom, back, and door and 3 in. thick in the sides. A heating wire in the breaker strip minimizes condensation formation there. An adjustable temperature control is provided.

Models 17D, 19D, and 22D have shelves in the door panel for canned concentrates and small packages.

The Tecumseh hermetically

sealed condensing unit is equipped with service valves so that the freezer can be serviced from the front.

In addition to the freezer line, Sub-Zero also showed its new "built-in" refrigeration equipment for homes, and its Thermopane glass door merchandising cabinets for commercial use.

The company has also announced ¾-hp. and 1-hp. room air conditioners available with inside cabinets finished in birch, mahogany, or blonde oak.

Servel Names Wall--

(Concluded from Page 1, Col. 5)

vice president at the next meeting of the company's board of directors on Jan. 25, the announcement said. He also became a member of the firm's executive committee.

For 19 years Wall was with the Bernardin Bottle Cap Co., Inc., local closure manufacturer, first as production manager, next factory manager, later sales manager, and finally general manager.

Five years ago he joined Kent Plastics Corp. here as secretary and factory manager, and in 1953 became vice president for manufacturing, including personnel, engineering, design, procurement, and processing.

During these years he was in charge of Kent Plastics' production of decorative and functional parts for nearly all major companies in the automotive and appliance industries.

Wall's appointment marks the start of a new Servel organization plan calling for five autonomous operating divisions, each headed by its own vice president and general manager.

As chief of the home appliance division, Wall will be completely accountable for all phases of procurement, manufacturing, plant, and general maintenance warehousing, shipping, marketing, distribution, customer service, and operating results (in terms of profit or loss) for appliance products.



REDESIGNED and re-engineered "Royal-Aire" self-contained packaged air conditioner, which was introduced recently by the Union Asbestos & Rubber Co. of Chicago. Heating coils may be added.

Unarco Packaged Air Conditioner--

(Concluded from Page 1, Col. 5) pressure in the coils when the machine shuts down.

"Aside from this safety factor, the feature means that less electricity is needed on starting.

"All service connections—electric, water, and drain—are easily accessible. The blower section is constructed so that it can be used for either vertical or horizontal discharge and can be adjusted for either position by the installation man in the field."

The versatile "Royal-Aire," Stackpole said, has a completely redesigned cabinet with clean, simple, modern lines.

The two-tone, semi-gloss, baked enamel, smooth grey finish is accented with gold trim above the fluting on the front panel, Stackpole pointed out, adding:

"A beveled edge around the front gives a picture frame appearance. Extruded aluminum air foil louvers are installed in the discharge grille. This eliminates any possibility of rust, discoloration, or deterioration."

The controls, he said, are located behind a push-in name plate at eye level to eliminate stooping or bending.

The front panel of the unit is in three pieces, with two return-

air openings—one through the fluted area—the other, a collar connection at the rear if duct operation is desired. Stackpole continued:

"We have also provided fresh air connections on both the right and left sides. The entire case is lined with ½-in. insulation to provide maximum thermal and acoustical insulating on all panels. It is bonded to the metal by mastic."

The unusually large blower plenum, he said, allows for maximum air delivery at reduced velocity, eliminating any chance of "whistle, whine, or hum."

A large squirrel cage fan, Stackpole said, has sufficient capacity to be used with a larger motor when the unit is installed with duct systems. The accessible hermetic compressor can be simply and rapidly serviced on the spot, he declared.

The unit is available in 3, 5, 7½, 10, and 15-ton capacities. Each unit has five-row cooling coils mounted in a vertical position to increase the dehumidification capacity.

The "Royal-Aire," Stackpole said, comes in three sections, each built as a unit. As a result, he said, it can be carried in any passenger elevator or transported in van-type trucks in an upright position.

Home Builders Show Exhibitors--

(Concluded from Page 1, Col. 3)

cussion: "Many important facts about air conditioning have been developed through the famous air conditioned village at Austin, Texas. NAHB's Research Institute, working with the University of Texas, has come up with important answers to many phases of residential air conditioning. Here is your chance to obtain information, released for the first time, about important developments in home building."

This session is the only one on the entire four-day program specifically devoted to air conditioning.

However, manufacturer exhibits of air conditioning equipment and appliances will be among the 544 displays scheduled to be opened starting at 1 p.m. Sunday, Jan. 16, for the duration of the convention. The exhibits will be staged at both the Conrad Hilton and Sherman hotels.

Air conditioning and appliance exhibitors include:

Admiral Corp., Refrigeration & Contract Div.
Airtemp Div., Chrysler Corp.
American Radiator & Standard Sanitary Corp.
Barber-Colman Co.
Berns Mfg. Corp.
Bryant Heater Div., A.G.E., Inc.
Carrier Corp.
Coleman Co.
Crosley-Bendix Home Appliance Div., Avco Mfg. Corp.
Delco Appliance Div., General Motors Corp.
Electromade Corp.
Frigidaire Div., General Motors Corp.
General Air Conditioning Corp.
General Controls Co.
General Electric Co.
Hotpoint Co.
Hunter Fan & Ventilating Co.

Iron Fireman Mfg. Co.
Lau Blower Co.
Lennox Furnace Co.
Minneapolis-Honeywell Regulator Co.
Mueller Climatrol
Norris-Thermador Corp.
Revco, Inc.
Rheem Mfg. Co.
Servel, Inc.
Surface Combustion Corp.
A. O. Sulton Corp.
Trion, Inc.
United States Air Conditioning Corp.
Welbilt Stove Co., Inc.
Westinghouse Electric Corp.

Kelvinator Sales--

(Concluded from Page 1, Col. 4) company's annual report to stockholders.

"However," the report said, "the trend of sales turned sharply upward in the late summer. Our September sales of household appliances were 9% ahead of the like month a year earlier, October showed a 25% gain, and November was 53% higher."

"Our contract business in condensing units and compressors also is heading into higher ground, partly due to the favorable climate for expansion which has resulted from settlement of the most recent strike."

"Orders already received for such products for the 1955 fiscal year are larger than any year's production in the company's history."

Romney claimed that American Motors is now the fourth largest manufacturer of major household appliances in the United States.

MATCHED ENCLOSURES!

ALL THE FEATURES plus....

SQUARE D's NEW

PLUG-IN

CONTROL CENTERS

DESIGN LEADERSHIP FEATURES

Increased Safety because bus bars are fully enclosed, rigidly supported and have ample cross section...circuits isolated by individually enclosed plug-in units...disconnect handle designed for maximum operator protection.

Flexibility. Individual plug-in units or complete sections can easily be added, removed or exchanged. Push-buttons, pilot lights, and selector switches can readily be added to unit doors.

Installation Economy. All wiring channels are large and accessible from front without removing units...no "wire fishing."

Space economy, too. Up to six combination starters fit in a 20"x20"x90" section. Plug-in unit heights are designed in space-saving increments of 3 inches.



SEPARATELY.... OR AS A TEAM THEY DO THE JOB BETTER!

SQUARE D's

NEW

POWER-STYLE

SWITCH BOARDS

DESIGN LEADERSHIP FEATURES

Distinctive Styling provides an attractive, modern appearance matching the control center design.

Easier Installation because removable front and back plates expose generous wiring parts. Isolated horizontal wiring trough has drop-off openings, assuring safer, neater wiring.

Flexibility. Complete sections or branch units can be added or changed to meet specific job requirements.

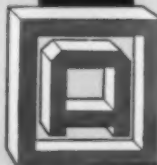
Easier Inspection and Maintenance. Front, side and back plates are removable, thus providing easy and immediate access to specific areas.

Write for Bulletin 244. Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin.

Write for Bulletin SD-18. Address Square D Company, 6040 Rivard Street, Detroit 11, Michigan.

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY



At Reduced Cost

Chicago Utility Announces Modern Wiring Program for Its Residential Customers

CHICAGO—Details of a 1955 modern wiring program that is designed to expand the Chicago and northern Illinois market for electric appliances and room air conditioners were disclosed to dealers in the area recently by Commonwealth Edison Co. and its Public Service Co. Div.

Included in the plan will be a comprehensive newspaper, television, radio, outdoor, and point-of-sale display campaign for both company and dealers.

In announcing his company's new better wiring effort, Edison's Chairman Willis Gale pointed out that last summer many customers who bought room coolers had to return them because they found that their homes lacked sufficient capacity to handle the appliance.

"We are now making it easy and inexpensive for our residential customers to obtain modern wiring that will enable them to take full benefit of today's electrical conveniences," he said.

"Although we realize we can't do it overnight, we hope to make our service territory the best wired of any comparable area in the country."

The utility-sponsored program will enable dealers to offer certain customers reduced installation prices in conjunction with purchases of 240-volt appliances.

To make the bargain-priced wiring possible, the utilities will absorb the expense of providing all outside equipment, including service entrance, if customers agree to replace inadequate 120-volt service inside the home with modern 240-volt service.

All customers living in one, two, or three family dwellings with two-wire, 120-volt service qualify for the outside wiring concession when they install a 240-volt appliance, together with a 100-ampere switch and the circuit required for the appliance.

In addition to saving an estimated \$30 or more, customers also will be offered convenient financing of their rewiring costs through Commonwealth or its division.

Arrangements have been made for local electrical contractors to make wiring installations at fixed prices for each locality. Price schedules are now in the hands of dealers and company stores, enabling them to quote exact prices for installation at the time appliances are sold.

The 240-volt appliances which must be installed under the program include ranges, clothes dryers, water heaters, air conditioners, and built-in auxiliary heaters. They may be purchased from any dealer or from the utility.

Approximately 615,000 families served by Commonwealth Edison Co. and its division are now limited in their use of modern electrical conveniences by inadequate two-wire service.

Wiring standards provided for in the program will permit these families to equip their homes with up to 10 120-volt circuits, in addition to the 240-volt service.

Amana To Increase 1955 Freezer Output

CHICAGO—Amana Refrigeration, Inc. plans to substantially increase freezer production in 1955.

Amana's freezer volume in the last quarter of 1954, which doubled that of the previous year and was the best in the company's history, reverses the freezer industry trend, said George C. Foerstner, executive vice president.

"Instead of the usual sales drop that the entire freezer industry has experienced in October, November, and December, Amana's excellent fourth quarter proves that people will buy freezers throughout the year—when they are properly presented and sold."

As proof that freezers moved from dealers to consumers as well, he cited the fact that during December, despite the holidays, Amana's receipt of freezer warranty cards was at an all-time high.

Nov. Refrigerator, Freezer, Range Sales Up In Philadelphia

PHILADELPHIA—Refrigerators, home freezers, and ranges scored good gains in this area in November compared with a year ago, according to distributor sales statistics released by the Electrical Association of Philadelphia.

November sales of refrigerators totaled 4,347 against 3,549 in the same month of 1953. Freezer sales rose from 544 a year ago to 843, and range sales totaled 2,022 compared with 1,589 in November, 1953.

To Condition Motel For Truck Drivers

BUFFALO—A 20-room, air-conditioned motel for truck drivers is being built at 260 Mystic St. to keep drivers from congested areas.

Appliance, Room Cooler Prices Reduced by Sears

CHICAGO—Lower prices on room air conditioners, freezers, and refrigerators are offered in the new catalog issued recently by Sears Roebuck & Co.

Room air conditioner prices were dropped from \$15 to \$30, freezers about 11%, and refrigerators from \$10 to \$20. Room air conditioner prices were as follows:

Hp.	Old Price	New Price
1/2	\$194.50	\$179.50
3/4	244.50	224.50
1	294.50	274.50
1 1/2	354.50	324.50

A 14.7-cu. ft. chest type freezer lists at \$314.50, which is \$10 less than last year. A 14.2-cu. ft. upright carries the same price, while an 18.2-cu. ft. upright is priced at \$369.50.

The "Super-Mart" refrigerator with freezer space in the bottom lists at \$359.95, a \$20 drop for the 11.4-cu. ft. box.

"give us the
FACTS...

then give us the
FIGURES!"



SMOOTH CONTOURS

NO Frost PUNCH difficulties to cause later service headaches. Houdaille's smooth-contoured steel plate-on-plate construction is most safe, most durable.



NO JOINT PROBLEM at the capillary tube or the suction line. Copper-to-steel joint will not develop dangerous leaks through failure from electrolytic action.



INTEGRAL HEADERS are full size for peak efficiency under changing loads, and there is no extra operation necessary in the form of an externally attached accumulator.



WHY ARE HOUDAILLE-HERSHEY EVAPORATORS MADE OF STEEL?

WHY CHOOSE Houdaille-Hershey STEEL evaporators over those made of other metals? To assist you in making your decision and forming comparisons, this advertisement was prepared to give you the pure facts: (1) Overall strength of steel construction practically does away with scrap losses in fabricating, shipping and final assembly. (2) Houdaille evaporators are furnace-brazed in controlled atmospheres, guaranteeing a perfectly clean refrigerant system. When the flushing out and cleaning must be done as a final operation, the results may not be entirely satisfactory. (3) Circulating combinations in steel are virtually unlimited. (4) Electro zinc plating plus an especially developed DuPont finish, far surpasses all heretofore established standard humidity test requirements. (5) Fast defrosting and fast response to changes give exceptional overall operating efficiency.

"Say 'Hoo Dye'"

CALL US TODAY and we will be most happy to give you the FIGURES.

Our telephone number at North Chicago is Dexter 6-4800.

HOUDAILLE-HERSHEY REFRIGERATION DIVISION

1900 FOSS PARK AVENUE NORTH CHICAGO (GREAT LAKES), ILLINOIS



Returns Too Low

Judson C. Burns Quits Distributing Appliances

PHILADELPHIA—The firm of Judson C. Burns will quit distributing appliances by March because "the possible returns do not warrant exposure of capital to risks," according to Sam S. Glass, president.

However, the company will retain its Victor freezer and Roberts & Mander Corp. divisions and, for the time being, the trading name of Judson C. Burns, Glass said.

Burns sells Victor freezers to area consumers on a food-plan basis. About a year ago, the firm bought the Roberts & Mander trade name and now sells replacement parts for these ranges nationally. Robert Brown, Burns' vice president and general manager, will continue to head the Victor and R. & M. divisions.

The company was founded in 1919. It was purchased in 1951 by Glass and his partner, Adolph Hirsch, then owners of Logan-Sport Distilling Co. The pair reportedly plan to go back to the liquor business.

Glass said the firm would try to sell or lease its modern two-story building at 31st and Oxford Sts. Failing in this, Glass will use the structure to house his enterprises.

The MIAMI STORY: An On the Spot Report on How Business Is Conducted In This Sub-Tropical 'Dream Place' Which Is One of America's Largest Markets for Air Conditioning

The Miami area is one of America's "dream places" which nearly every U. S. citizen aspires to see at least once before he dies, and to which increasing numbers of people are migrating every year to set up permanent residence.

Its sub-tropical climate is part of its great attraction, but that same climate also makes the Miami area one of the nation's greatest markets for air conditioning equipment. In turn, air conditioning has contributed to the stability of the Miami Beach resort area by making it possible for hotels and motels to stay open through the summer months, with occupancy nearly as high as during the winter season.

Most people have a pretty fair idea of what Miami is like, but what's it like to do business in the air conditioning and refrigeration field in that part of the country? Assistant Editor George M. Hanning, who recently spent several weeks in the Miami area, has written some of his impressions of how the air conditioning and refrigeration business is conducted there, and these are being presented in a series of articles.

These articles are not to be viewed as a comprehensive survey of the market or specific "who sold what," but rather as a report on some phases of the business that will give readers a "feel" on how things are done in the Miami area. This first article is in the form of an "introduction" to the series, and subsequent ones will deal with an air conditioning installation in the newest and biggest hotel on the beach, how a newcomer to Miami found the business, and some other phases.

By George M. Hanning

MIAMI, Fla.—So you'd like to live in Miami!

Warm sun, golden sands, cool ocean breezes, wonderful fishing, glamorous night life, colorful architecture, and what a market for air conditioning and refrigeration equipment!

There's no other place like it in all these United States. The Chamber of Commerce says so—repeatedly and without hesitation. And, as usual, there is a basis of truth in it.

Where else but in Miami Beach will you find a fabulously luxurious 560-room resort hotel such as the Fontainebleau being rushed to completion at a cost of more than \$14,000,000 on a street that already is jammed cheek by jowl with literally thousands of similar hotels and motels, each competing furiously to outvie the other in glamour, color, and neon lights to attract the almighty tourist?

Cooling Is A Must

Air conditioning sells by the thousands of tons here. They all have to have it. Those that don't are getting it fast. What a market!

And with 60,000 new mouths to feed each year—people who come to Miami for a visit and refuse to go home—supermarkets are popping up out of the coral and sand

everywhere. Independent grocers by the hundreds are also going after that business.

Where else but in the Miami area will you find supermarkets adding refrigerated cases by the hundreds of feet and even small corner grocers crowding some 50 ft. of refrigerated fixtures in a store 65 ft. long and only 16½ ft. wide. And they have to be air conditioned, too. What a market!

Rapid Industrial Growth

And then there is the rapidly growing industrial development of the area. Businessmen are not only looking to serve local needs but have a serious weather eye peeled to the south, visualizing Miami as the gateway to an expanding trade with the Caribbean and Latin America. Air conditioning for both comfort and production is a virtual necessity—with the heat pump moving in strong to take care of year-round needs.

Speaking of the heat pump, where else but in south and central Florida will you find residential heat pumps already shouldering straight air conditioning aside and at least one dealer selling 3½ times as many heat pumps as straight air conditioning? With naturally warm water and plenty of it to use, what a market for heat pumps!

But as you glance out of your window at the leaden gray skies, dirty, slushy snow, and pre-shrunk mercury in your outside thermometer and decide to chuck it all and head south tomorrow, give a listen to what the boys on the spot have to say about their market.

'Competition Is Rough'

"Competition? Brother, it's really rough. The big boys think they own the town and won't let you get a foothold. And the little fellows will give their equipment away just to stick around and soak up the sunshine. I'm glad I don't have to depend on the refrigeration business to make a living down here."

"This market is different down here. People don't do business the same way as they do in other states. Even those that have come down from the north adopt local ways. We had a fixture salesman who won a top regional sales award in New York come down here and, trying to sell the same line of equipment, give up after six weeks. He couldn't make a go of it."

This Is a Boom Town And Hasn't Settled Down

"This is a boom town and hasn't settled down yet. You've got to watch your step here. A little shop keeper might order a raft of equipment one day and go out of business the next. There are a lot of drifters looking for a fast buck."

The "big boys" admit it's rough, too. And, like the "big boys" anywhere, they consume a lot of midnight oil thinking up ways to provide better service for their customers or better techniques that

will enable them to get business that they might lose otherwise.

Little Boys Aren't Talking

The little fellows—the ones we conversed with anyway—were not talking about their business. They, too, are looking for ways to beat their rough competition, and if they find one, they are not interested in letting others hear about it.

One refrigeration man put his finger on one reason so many businessmen shudder when they think about their market. Said he,

"The trouble is that when people up north decide they want to come to Miami to stay, they want to escape more than the snow and cold. They are trying to escape their old job too."

Men Avoid Their Life's Work

"A man who has been in the grocery business all his life, for instance, comes down here and wants nothing more to do with the grocery business. So he tries real estate or refrigeration or anything that appeals to him but the grocery business."

"Not knowing the first thing about his new business, he wakes up one morning and finds his capital gone and no orders coming in. He wonders what happened. He blames rough competition. He believes it, too, because for every competitor that drops out there are six more ready to take his place. If he'd stuck to the business he knew he would have been much better off and so would the rest of the trade."

But ask these adopted Miamians why they don't go back home. They wouldn't leave for the world. They just love it here!

YOU'LL SELL MORE PROFITABLE JOBS

with the complete line of

Curtis

AIR CONDITIONING AND REFRIGERATION EQUIPMENT

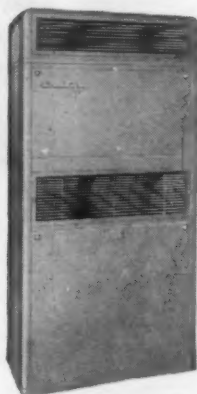
Every product in the Curtis line is built with quality material and workmanship.

Curtis equipment is known around the world for its dependability and efficiency.

With the complete Curtis line, you can handle any installation for Home, Office, Store, or Factory.



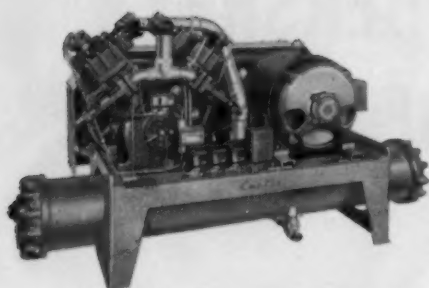
Room Air Conditioner — an attractive, efficient unit with a BIG market potential



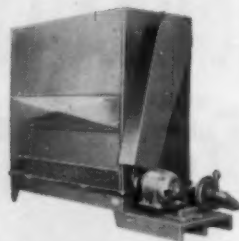
Packaged Units—2, 3, 5, 7½ and 10 tons
Choice of open or semi-hermetic compressors... and 15 ton packaged Central type units



Residential cooling and heating units



Condensing units—through 80 tons



Evaporative Condensers, Cooling Towers and Air Handling units to match

You may qualify for a direct factory franchise. Write us, using your company letterhead.

See our new 100th Anniversary products International Heating and Ventilating Show... Philadelphia, Jan. 24-28.

BE SURE TO VISIT BOOTH NO. 51.



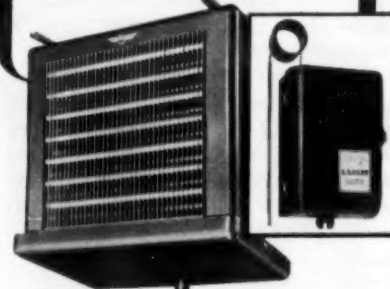
National advertising in Saturday Evening Post, Time, Newsweek and House and Home, plus many other publications helps sell Curtis to your customers and prospects. Attractive new sales literature is available to help you sell in your local area.

CURTIS REFRIGERATING MACHINE DIVISION
OF CURTIS MANUFACTURING CO.

1912 KIENLEN AVENUE
ST. LOUIS 20, MISSOURI

LARKIN MEANS LOW OPERATING COSTS

FROST-O-TROL® AUTOMATIC HOT GAS DEFROSTER



The purchase price of any product is often misleading, for it precludes the cost of long-run operation. All Larkin products are engineered for the lowest possible operating costs, yet they are priced right. That's why Larkin leads the field for long-run, low-cost operation.

Manufacturers of the original Cross-Fin Coil
• Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS, INC.

319 MEMORIAL DR., S.E. • ATLANTA, GA.

for a variety of applications use

MIDWEST CENTRIFUGAL PUMPS

- EVAPORATIVE COOLERS
- CONDENSATE PUMPS
- BEVERAGE COOLERS
- HUMIDIFIERS
- TO YOUR SPECS.

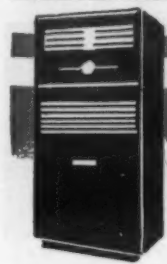


25-42-50-60 CYCLE
6-12-110-220 VOLT AC-DC
HEADS UP TO 10 FEET
GPH UP TO 225 GAL. AT 6 FOOT

We solicit inquiries

TECH-TRON CORP.

LAWRENCE, KANSAS



AIR CONDITIONING

All This and Comfort, Too!

Bouncier Balls, Better Game Is Dividend For Air Conditioned Squash Courts

ATLANTIC CITY, N. J.—When the Chalfonte-Haddon Hall Racquet Club here air conditioned the squash courts on the top floor of the swank shore hotel, it got an unexpected dividend.

Besides the added comfort of playing in a uniformly pleasant temperature, players found that the dehumidified air causes the squash ball to bounce more accurately off the walls and court floors—eliminating excessive ball action. The result is a more scientific game with faster action and more thrilling volleys, it was pointed out.

Since squash is a sport that combines the fast-moving elements of hand-ball and badminton, summer climate and warm temperatures caused by heating adjacent rooms in cooler months have always been problems. When courts get excessively warm, the rubber squash ball softens and bounces erratically.

The Racquet Club recently installed a 5-ton York water-cooled condenser and a Tenney cooling unit on each of the Chalfonte-Haddon Hall courts. According to

Robert W. Leeds, hotel manager and an enthusiastic player himself, the air conditioning has had a decided effect on the game.

"Not only is the play faster and more exciting, but squash has now become a year-round sport," said Leeds. "Increased interest in the game among hotel guests and many new requests for membership in the Racquet Club indicate an upswing in the popularity of the game. As far as we know, the squash courts at Chalfonte-Haddon Hall are the first to be air conditioned in the country."

Drayer-Hanson Sales Meetings To Coincide With Philadelphia Show

LOS ANGELES—A 2,870-mile switch of convention locale is ahead for representatives of Drayer-Hanson, Inc.

This year, the Los Angeles air conditioning and refrigeration equipment manufacturer is staging its annual first-of-the-year sales meetings in Philadelphia, in place of Los Angeles. The sales convention will run during the week of the 12th International Heating & Ventilating Exposition at Philadelphia.

According to Ross Rathbun, Drayer-Hanson's national sales manager, the company is switching from its factory facilities and the Los Angeles Biltmore hotel—scene of previous conventions—for two reasons: a majority of company representatives will be on hand in Philadelphia for the Heating & Ventilating Show and the bulk of the company's line will be shown in the Drayer-Hanson three-booth display on the exposition floor, and available for reuse.

The meetings will be conference-type in format. Conducting will be Rathbun; Al Hanson, vice president in charge of sales and engineering; and other key company officials.

Carrier N. Y. Distributor To Fair Trade Room Units

NEW YORK CITY—Plans of Carleton-Stuart Corp., local distributor, to fair trade Carrier room air conditioners in the New York City market this year were revealed recently by Charles Mitchell, room unit sales manager.

Mitchell said the new policy should result in increased sales of Carrier units and higher dealer profits because dealers will be able to make more money per sale.

He said fair traded prices of air conditioners will be somewhat lower than the factory's suggested list prices. Advertising will not be allowed at the fair traded price, Mitchell added.

Houston's Largest Bldg. Uses 77 'Weathermakers'

SYRACUSE, N. Y.—Receipt of the air conditioning equipment contract for Houston's Second National Bank, which reportedly will be the largest building in this air conditioned city, has been announced by Charles V. Fenn, vice president, Machinery & Systems Div. of Carrier Corp.

Designed by Architect Kenneth Franzheim, the 24-story skyscraper's 824,153 sq. ft. of space "will be cooled by the largest refrigeration plant installed in a commercial building in the south at the time of construction," according to Fenn. Three large Carrier centrifugal cooling machines will provide a total of 3,000 tons of cooling capacity, Fenn said.

It is exceeded in size among single new commercial building installations only by the Socony-Vacuum building now under construction in New York City, also a Carrier installation, Fenn stated.

H. E. Bovay, Jr., designed the air handling mechanical system and engineering consultant R. F. Taylor assisted with layout of the system.

The new structure has four-story base section covered with polished maroon granite and an aluminum-clad tower section. It occupies a full city block at the corner of Walker and Travis Sts. Featuring the nation's largest banking lobby, the building is expected to be ready for occupancy during the spring of 1956.

The bank itself will occupy the second and third floors. The first floor and lower level will have air conditioned concourses lined with specialty shops and other retail establishments.

Conditioned air for the building will be supplied by 77 central system "Weathermaker" units located in small equipment rooms individually serving each floor. Some 51 of these are Carrier Zoning Weathermakers which can supply air of different temperatures to a number of zones at the same time from a single piece of equipment.

Chilled water for cooling and dehumidifying is piped to these central units. Warm water is supplied from a central boiler.

Approximately 95% of the

water used in the condensing coils of the refrigeration system will be saved by installation of a rooftop cooling tower.

Offices located next to outside walls will be served by a peripheral duct system. Conditioned air will be discharged from under the windows through window sill grilles.

Individual room occupants may regulate their own weather by means of a small dial governing the amount of air admitted to the room. Air will be disseminated to interior spaces through overhead ducts and ceiling diffusers.

Mechanical contractor is Straus-Frank Co.

Bomb-Proof Comfort

LOS ANGELES—An air conditioned bomb shelter will be a feature of a \$10,000,000 hotel proposed to be built on a mountainside near here. The shelter will be 200 ft. beneath the mountain.

Owners and operators are Norman K. Winston, New York City, and Hal B. Hayes, Los Angeles contractor.



It's great to be a Carrier Home Weathermaker* Dealer!



Because Carrier Distributors are extra helpful!

Maybe there are some Carrier Distributors who would baby-sit with a prospect's kids while their dealer closes the sale! They like children; they'll do just about anything to help a dealer. Why, they arrange publicity, write advertisements and direct mail, make consumer surveys, lend you engineering help! But besides...

Carrier Distributors know air conditioning!

They grew up in the air conditioning business! Twenty-five of them have been associated with Carrier for more than twenty years! They're the industry's most experienced air conditioning distributors!

If you aim to make good in the home air conditioning business, you just can't find stronger support anywhere!

You have the Carrier name to sell!

Carrier doesn't make light bulbs, TV sets or phonographs—just air conditioning! They're the people who know air conditioning best!

Would you like to sell Carrier Weathermakers? They're the country's biggest selling home air conditioners! Your Carrier Distributor has a wonderful "How to Get Started" course in the estimating, sale, design, application and installation of home air conditioning! Better enroll right away!

Mail the Coupon! Learn Home Air Conditioning!

*Reg. U.S. Pat. Off.

Look what you get from the Carrier Distributor!

- A special course: "How to Get Started in the Home Air Conditioning Business!"
- A special "Starter Package" to help you let the world know you're a Carrier Dealer!
- Low-cost financing and warehousing plans to ease your inventory problems!
- Four retail financing plans designed to make payments painless for your customer!
- Continuing, on-the-spot sales, advertising and engineering assistance whenever you need it!

Look at the Weathermakers you have to sell!

The Carrier Conversion Weathermaker, illustrated below, adds cooling to any warm air heating system. The compact cooling coil section fits onto the furnace or in the ducts. The refrigerating section may be installed anywhere outside the conditioned space. Other Weathermakers are designed for new houses, to replace old furnaces, for homes with wet heat. Together, they make up the industry's best selling line of home air conditioners!



Air Conditioning Refrigeration Industrial Heating

CARRIER CORPORATION, 310 S. Geddes Street, Syracuse, New York

Please put me in touch with the Carrier Distributor who can enroll me in that Home Air Conditioning Course.

I'd be interested in selling: ☐ Carrier Self-contained Weathermakers ☐ Carrier Room Air Conditioners ☐ Carrier Residential Weathermakers ☐ Carrier System Weathermakers ☐ Carrier Ice-makers

Name _____

Street _____

City _____

State _____



How To Use Food Plan To Merchandise Home Freezers Through Department Stores

CHICAGO — After some 15 months working at it, Eugene Greenhut knows for certain that home freezers can be sold on the food plan through department stores.

Greenhut, the president of E. Greenhut Corp. of New York City, claimed here recently that his firm sold more than 5,000 freezers through 10 department stores—a volume in excess of \$2,000,000—in the past year.

Starting in Tampa, Fla., in October, 1953, he has developed food plan operations for stores in St. Petersburg, Lakeland, and Miami, Fla.; Philadelphia; Trenton, N. J.; Cincinnati; New Orleans; San Francisco, and Oakland, Calif.

Greenhut asserted that the tie-in between department store and frozen food plan—as he operates it—has proved to be advantageous to both. The food plan benefits from the prestige and backing of the department store. This gives the salesman a more ready acceptance in the community.

The department store benefits at the rate of 15% profit on freezer sales with practically no financial investment or loss of valuable floor space—only a desk is required where a food plan girl can receive calls and pass them on to

the sales and service organizations.

The food plan operates as a leased department, Greenhut said. He indicated that in every store his food plan has sold more freezers than the store's major appliance department.

DEPT. STORES HAVE DOUBTS ABOUT FREEZER-FOOD PLANS

However, selling conservative department store management on setting up a food plan department is no easy matter, Greenhut noted. Store officials are only too well aware of the "bad name" that fast operators have given food plans in the past. Some have tried various forms of food plans on their own with little success.

To overcome this, Greenhut draws on his long experience in the department store field and his knowledge of the "department store mentality." He commented that he was one of the founders of Allied Stores back in 1928 and has been intimately associated with the organization for many years.

"While department stores are interested in profit as much as anyone else," Greenhut explained, "their first thought is not how much money they can make, but

will the customer be happy with his purchase.

"They all value the goodwill of the customer more than they do the immediate profit on a sale. That is why they are always willing to take anything back, no questions asked, if the customer is not satisfied with it.

"They want no part of anything that will cause their customers to be dissatisfied and will study a new venture for a long time before deciding to take it on. By the same token, once they have accepted a proposition such as the food plan, they will go all out to make it a success and back it to the hilt."

When setting up a new food plan for a department store—the food plan takes the department store's name—Greenhut and his organizer-vice presidents, Gunther Reis and J. Scott Kennedy, give the store three checks on the plan.

First, the department store personnel must approve every salesman hired by the food plan.

Second, the store must approve in advance the sales techniques taught the men so that they do not violate store policy. Store officials can also check on actual presentations to see that the proper techniques are being followed.



HOME & FARM FREEZERS



Third, all contracts sold must be approved and accepted by the store's credit department. The store also handles collection of installment payments.

Within these restrictions, this is how Greenhut operates his food plan organization:

As mentioned before, the only space occupied in the department store itself is for a telephone answering service. Headquarters for the food plan is established in another location—one where parking is available and which will be more convenient to the private home type of neighborhoods in which the men will be working.

The manager of the new operation, along with Reis or Kennedy, then interviews prospective salesmen. Those they select, after passing scrutiny by the store's personnel department, are given two weeks' intensive training before being sent out to sell.

Training of the salesmen is continuous, Greenhut emphasized. Salesmen are required to attend at least four 9 a.m. sales meetings a week for further drill in store policies, keeping customers satisfied, and correct selling methods.

MEN ENCOURAGED TO SELL CORRECT FREEZER SIZE

Greenhut's men sell three sizes of freezers, 12, 16, and 19-cu. ft. uprights. In order to encourage them to sell the correct size freezer for the family rather than the largest one possible, Greenhut pays a straight \$40 commission on the 12-cu. ft. model and a \$60 commission on the other two. The freezers sell at \$499.95, \$599.95, and \$699.95, respectively.

Delivery, installation, and service are handled by the local Deep-freeze distributor.

Sales techniques used by Greenhut's men differ from the ordinary food plan not so much in content as in approach. Convenience the freezer will bring to the family rather than exaggerated money savings is stressed.

So that the convenience story will get a ready hearing, the salesmen find their prospects among middle class, home owning families whose incomes range between \$4,000 and \$8,000 per year. Among this group, convenience is as much a buying factor as savings, Greenhut believes.

ADVERTISING RESULTS DEEMED PRACTICALLY NIL

Prospects are gained almost entirely through door-to-door canvassing and referrals. Greenhut advertises the food plan only if the store insists upon it. His experience has been that response to food plan advertising is practically nil. The best source of prospects, he finds, is satisfied customers.

No big savings are claimed for the freezer, Greenhut explained. Salesmen do point out that savings can be made through judicious buys and bulk purchases. When telling the savings story, they stress that the family will eat more and better food on their present food dollar, not that they will spend less money.

Because convenience represents the most important part of the sales story, salesmen are instructed to ascertain that the housewife has a convenient place to put her freezer before they make their pitch. If the freezer cannot be conveniently placed, the customer will not get the full benefit from it, Greenhut said. Then she won't be satisfied with it.

The salesman's story is arranged so that he can tell it in about 45 minutes. So when asking for an appointment to make his presentation, he requests the housewife for a time when she and her hus-

band can spend an uninterrupted hour with him.

MOST CALLS MADE DURING THE EVENING

As a result, most of the salesman's calls are made in the evening.

Another point that Greenhut stresses with salesmen is that they must make certain that the customer understands what she is buying—both a freezer and food—and must understand the contract she is signing.

"If this is made clear right at the beginning," Greenhut said, "it saves a lot of misunderstanding and dissatisfaction later on."

The customer is given up to two years to pay for her freezer and four months—the expected life of the initial food supply—to pay for her food.

The food is purchased through a local purveyor, who delivers it to the home. Greenhut keeps a constant vigil over the food supply to make sure that quality is maintained and the customer gets a good deal.

One department store, Greenhut related, in order to convince itself that its food plan was being sold in a manner to reflect credit on the store, had three of its comparison shoppers shop the plan.

Two posed as prospects who, in the end, refused the purchase. The third listened to the salesman's pitch, bought the plan, and had the freezer and food delivered. She checked all phases of the operation.

All reports, Greenhut said, while not 100% favorable, reflected credit on the salesmen who answered the shoppers' calls. One shopper indicated that if she hadn't been instructed not to buy, she might have bought the plan.

The third report by the shopper who had the freezer and food delivered so pleased the store that it paid the salesman the commission he would have earned if the sale had been legitimate.

OLDER WOMAN FAVORED AS HOME ECONOMIST

In addition to the sales personnel, the food plan organization includes a home economist. Her job is to visit each customer after the freezer has been installed for about a week and answer any questions the new user may have. She also gives advice on how to freeze and store different foods.

For this task, Greenhut always selects an older woman. An older woman, he believes, will more easily gain the confidence of a housewife than a young woman just out of college.

"It takes about three months to shake down a salesman so that he thoroughly understands his job," Greenhut commented, "but it takes nine months and longer to shake down a credit man."

"What is hard to get across to them is that most of this money the customer would be spending for food anyway. It is not entirely an added obligation for him."

Because of this difficulty, Greenhut indicated, some credit men are inclined to delay their approval of a contract for a week or even longer.

"We try to impress on them," he said, "that we don't care whether they say yes or no to a contract as long as they do it promptly. Delay will often kill a sale."

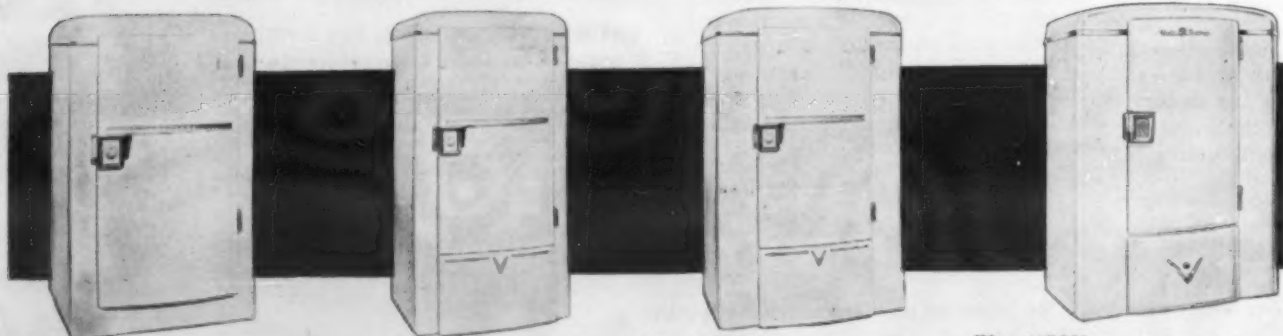
"It also reacts adversely on the customer. If the salesman has to explain that he is not getting his freezer because the credit department has not cleared the credit yet, his reaction is 'What is the matter with those people? Don't they think I can pay for it?'"

"He gets insulted and then cancels the order."

MODEL 19D

A De Luxe Model featuring increased capacity (19.3 cu. ft.) with Sub-Zero's new in-the-door shelving and Sub-Zero's high standard of quality that means economical operation and trouble-free performance.

Here it is! The newly designed Sub-Zero line of upright freezers for 1955. Sub-Zero... with all-aluminum construction... with new trim and gleaming white interior doors... with attractive, modern styling and real sales appeal... with the finest of performance records. It all adds up to more sales... more profits... for you... with Sub-Zero!



The "12" A brand new model with 12.1 cu. ft. capacity.

The "17D" Medium sized De Luxe Model with 16.9 cu. ft. capacity.

The "22D" De Luxe model with 21.9 cu. ft. capacity.

The "26" Large capacity model with 25.5 cu. ft. capacity.

Get the Facts...
Write Today!

SUB-ZERO

FREEZER CO., INC., MADISON, WISCONSIN

Commercial Refrigeration

2,000 Lbs. Per Day

New Large Capacity Ice Makers Designed For Supermarkets, Hotels, Hospitals

SYRACUSE, N. Y.—Two new large-capacity automatic ice-making machines designed to produce flake-ice in quantities of 1,000 lbs. and 2,000 lbs. a day are announced by Carrier Corp. for immediate production and sale.

In addition, Carrier reported that it will begin production soon on a chip-ice machine with a capacity of 500 lbs. a day.

Added to Carrier's current "Ice-makers" which produce cubes or crushed ice in quantities of 200 and 450 lbs. a day, the new equipment will give the company a wide range of automatic ice-making equipment, it was pointed out.

The new machines are being marketed under the trade name Carrier "Flakemaster" and "Chipmaster," according to Michael Kane, Carrier sales manager for automatic ice-making equipment.

The 500 and 1,000-lb.-a-day ice-making machines will be available with either air-cooled or water-cooled refrigeration.

The Flakemasters and Chipmasters have been specifically designed to meet the large capacity requirements of poultry, fish, and produce markets, as well as supermarkets, hospitals, hotels, soda fountains, bars, and restaurants, Kane said. Multiple units may be installed if greater capacity is needed.

Individual machines can be strategically located in large packing houses, hotels, or hospitals, eliminating extra handling and the need to transport the ice over long distances, it was noted.

Automatic start-up of the equipment when ice is removed from a full bin insures a constant supply and ends the problem of estimating requirements ahead of time and ordering the right quantity from outside sources, Carrier said.

The new Flakemasters are available with standard storage bins of 500 lbs. capacity and either two or three access doors. The Chipmaster uses a bin of 250 lbs. capacity. Custom-made bins for greater storage need can be made to order in a wide range of sizes.

Carrier's present 200 and 450-lb.-a-day Ice-makers produce either cubes or any of three grades of crushed ice at the turn of a dial. They are available with storage bins of 100, 160, and 240 lbs. capacity.

The Flakemasters will range be-



LARGE CAPACITY Carrier ice maker. Flake-ice, made by sanitary freezing apparatus flushing itself after every harvest, is automatically produced until the storage bin has been completely filled. Additional flake-ice is manufactured as soon as ice is scooped from the bin.

tween 6 and 8 ft. in height when mounted on standard bins. They are produced in a range of standard voltages.

In the flake-ice machines, a stream of water running down the inside of a stationary cylinder is spread by a disc rotating at 1 1/3 r.p.m. and is frozen by refrigerant action into a thin film of ice.

A cutter resembling a rake revolving inside the drum scrapes off translucent ice flakes 1/16 in. thick without ever coming in contact with the cylinder. This feature eliminates wear on the cutter blade.

The freezing surfaces for all machines are chrome plated and the bins into which the ice falls for storage are lined with stainless steel. In the case of Ice-makers producing both cubes and crushed ice, the cubes fall into one side of a divided bin and the crushed ice into the other side.

Fritzler To Represent Jordon In Seven-State Western Area

PHILADELPHIA—Jay J. Fritzler has been appointed sales representative for Jordon Refrigerator Co., John E. Mack, manager of the Commercial Sales Div., announced recently.

Fritzler will cover Montana, Wyoming, Idaho, Utah, Colorado, New Mexico, and Arizona.

A graduate of the University of Denver, he has had experience as a salesman, merchandise manager for the largest "rack" jobber in the mountain states area, and manufacturer's representative.



MOLDED REMCAL DRYING FIBERGLAS DEPTH FILTERING

Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiber-glass depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.

REMCO INCORPORATED ZELIENOPLE, PA.

Independent Retail Grocers Anticipate Good Year

Increased Investments, More Self-Service Planned, NARGUS Survey Finds

CHICAGO — Independent retail grocers throughout the country expect to increase volume in 1955 and are looking forward to a business year that will offer aggressive food merchants greater opportunities than ever before for growth and expansion.

This was reported by the National Association of Retail Grocers which recently completed a nationwide spot check of its members' operation plans for 1955.

NARGUS said the overwhelming majority of retailers expects sales volume in 1955 to exceed 1954.

Although planning to cut costs wherever they can in 1955, independent retailers intend to increase their investment in new and remodeled stores and in modern equipment, NARGUS also stated.

"Such improvements, they consider, will prove in the long run more economical than their present operations," the association said.

Separate studies by NARGUS of the trends in meat and produce marketing reveal that "most retailers who go into self-service meat operations nowadays go in 100% without feeling their way

along with partial self-service.

"They now have a fund of knowledge on cutting methods, wrapping materials, packaging, and merchandising techniques which remove many of the problems they encountered four or five years ago.

"Merchandising of frozen meats has been stepped up in the past year even though a very small percentage of our total meat supply is frozen in consumer-sized packages. Volume is still growing and research is centering on color and flavor. Quality of consumer packages of frozen meats has improved substantially and especially in the well-known brands.

"The trend toward self-service in produce continues, with 40% of retailers now operating self-service departments. Two years ago about 10% had self-service produce departments.

"Produce packaging has demonstrated to many key people in the industry that brands on consumer packages develop real meaning to customers if the value in the merchandise is maintained as representative of the brand. . . .

"There will be more central produce packaging through warehouses and supply sources. Shipping point packaging will increase in a number of commodities such as apples and root vegetables like carrots, parsnips, and turnips. While old line jobbing and com-

mission selling on terminal markets will further decline, packaging volume will increase in such location. . . .

"Research will uncover means by which more highly perishable varieties can be packaged in retail units at terminals and shipping points, too. For example, ripening and discoloration in pears can be controlled over a greater length of time now through the use of polyethylene liners in shipping containers and controlled storage conditions. Since consumer unit packaging of pears will increase volume in the fruit, NARGUS is looking for a development in this direction."

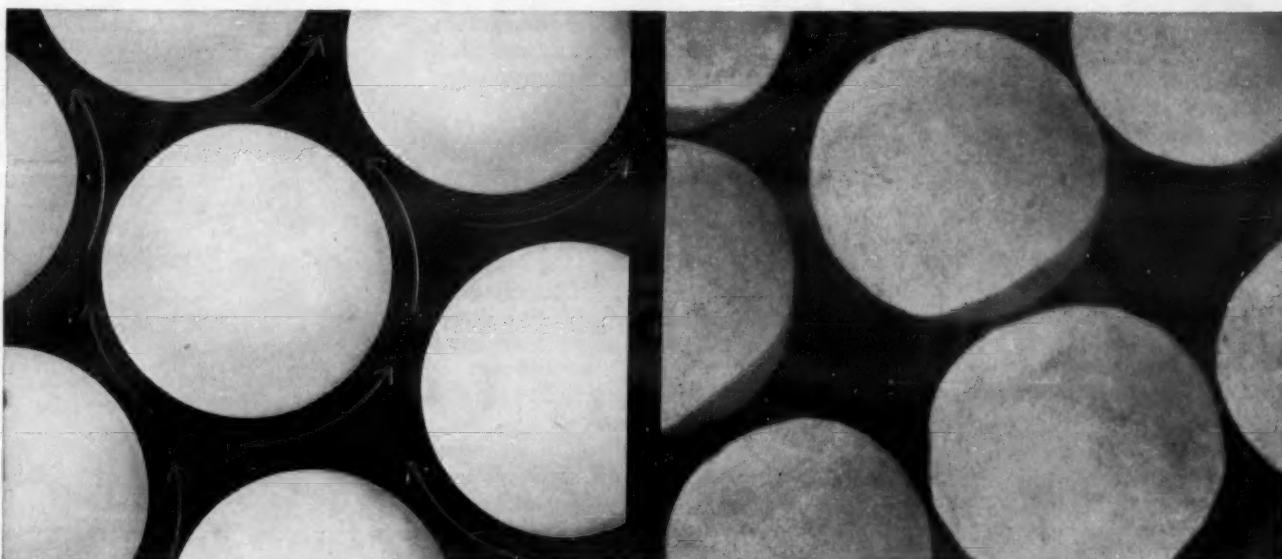
Motel Show Planned For Atlanta Mar. 22-24

ATLANTA—Motel people from all of the 48 states, but particularly those south of the Mason-Dixon Line, will converge on Atlanta March 22-24, 1955, for the first mid-season presentation of the National Motel Show.

Manufacturers of air conditioners, radiant heating, metal furniture, swimming pools, and office control machinery are among the first to be announced as exhibitors at the show.

Exhibit will be held at the Atlanta Biltmore hotel.

acid causes refrigeration system breakdown!



Pelletized spheres distribute flow, eliminate channeling.

Greater surface area traps more acids and moisture.

AN•DRITE

(ANSUL-TREATED 100% ACTIVATED ALUMINA)

removes acid!

Activated alumina in pellet form makes Ansul's new Andrite the double-duty desiccant. Its thousands of fast drying surfaces dry deeper—pulling moisture content way down. But even more important, Andrite removes acid, cleans up the chemical condition that causes sludge and corrosion—the major cause of refrigeration system breakdowns.

Designed for the revolutionary Ansul T-Flo Drier, Andrite won't break down or dissolve to plug filters or damage compressors.

And the drier is easy to install, too. Even replacement of the drier cartridge saves time, because it screws in like a light bulb. And no tools are needed. For fewer callbacks, speedier servicing, change to Ansul. And be sure to give new equipment double protection in acid and moisture removal. Use Ansul T-Flo Driers with Andrite.

For more information or answers to your refrigeration problems write to: Ansul Chemical Company, Refrigeration Division, Dept. D-1, Marinette, Wisconsin.

DuPont "Freon," non-foaming oils, sulfur dioxide, methyl chloride

ANSUL



SCREWS IN LIKE A LIGHT BULB

Filtrine Since 1901

Tank Type WATER COOLERS

- Extra-large storage
- Safety from freeze-up
- Fast hourly recovery
- 20-year life construction

Capacities: 5 to 500 g.p.h.
Storage: 2 to 240 gals.

Water coolers for all uses factory-packaged with your condensing unit. Write for literature.

FILTRINE MFG. COMPANY
53 LEXINGTON AVE. • B'KLYN 38, N. Y.

Louisville Considers Ordinance To Cut Fire Hazard from Overloaded Circuits

LOUISVILLE, Ky. — Concern over the fire hazard presented by electricity-hungry appliances in homes that are not adequately wired has city officials thinking of passing an ordinance to regulate their installation, it was indicated here.

They would like an ordinance patterned after the one recently passed in Memphis that requires appliance dealers to report the sale of appliances using more than 1,000 watts. Then the city inspects the purchaser's home to see that it is wired properly to carry the additional load.

Ray H. Scherzer, chief electrical inspector for Louisville's De-

partment of Building and Housing, stated, "A serious fire threat has been building up from widespread use of large electrical appliances in improperly wired homes."

H. L. Foster, head of Louisville's Fire Prevention Bureau, declared the overloading of electrical circuits by large appliances is one of the most important causes of fires in the city.

Scherzer noted that Louisville's present electrical code can require property owners to install wiring or lose their electrical service. He opined that a new regulation should apply only to appliances using more than 1,300 watts, so as to eliminate home lighting fixtures.

Frigidaire Sales Opens Ft. Worth Distribution Center, Headquarters

FT. WORTH, Texas—A new headquarters and distribution center has been opened by the Fort Worth branch of Frigidaire Sales Corp. on a site facing the East-West Freeway at Montgomery St.

H. L. McGurk, branch manager, said that the new distribution center will serve Frigidaire dealers in parts of Texas, New Mexico, Arkansas, and Oklahoma. Frigidaire household appliances, air conditioning equipment, and commercial refrigeration products are distributed over this area by the Fort Worth Branch. The operation was formerly carried out at 2601 W. Seventh St.

The new modern brick, concrete, and glass structure has a total area of 62,500 sq. ft. There are 24,000 sq. ft. of office space, 32,500 sq. ft. of warehouse area, and 6,000 sq. ft. for the service parts and accessories operation.

Interior color schemes in the air conditioned offices are in keeping with Frigidaire's new colored appliances, including Sherwood green and Stratford yellow pastels. A large auditorium that will seat 300 persons is included, together with a service training school room, home economics kitchen, lounge for employes, and large lobby at the entrance.

The new building has facilities for unloading five railway freight cars and loading seven motor trucks at the same time. A parking area large enough for 100 automobiles is located at the north end of the building and there is an additional area for visitors on the Montgomery St. side.

General Air Conditioning Opens Office In Houston; Boethling Heads Branch

LOS ANGELES — General Air Conditioning Corp. here, manufacturer of sink-range-refrigerator combinations and domestic air conditioners, has announced the opening of a Houston, Texas branch office.

Located at 915 Alabama Ave. at Main, the Houston regional office will be managed by John Boethling. He has been transferred from the Los Angeles home office and factory after many years association with the firm.

W. H. Laband, president of the company, in making the announcement, reported that the company's growing sales in the Texas area make the opening of a regional office necessary.

The company also maintains branch sales offices and warehouses in San Francisco, Seattle, Chicago, New York City, Miami, Tampa, Boston, Philadelphia, and Cleveland.

N. J. Firms Sue Philco For Discrimination, Charge Chains Get Preference

NEW YORK CITY—A suit charging Philco Corp. and Philco Distributors, Inc. with price discrimination and restraint of trade has been filed in U. S. District Court by Jersey Tire Co., Inc. and Apartment House Supply Co., it has been reported.

Treble damages of \$222,750 are sought by Jersey Tire, operator of four appliance stores, and Apartment House Supply, which trades as Brick Church Appliance Co. Issuance of a restraining injunction also is asked.

For at least six years, the suit charges, the defendants have granted preferential treatment to chain stores. Chain store customers were recognized as "associate distributors" or "factory accounts," it is asserted.

Union Electric To Cease Appliance Sales, Service

ST. LOUIS—Union Electric Co. of Missouri plans to discontinue selling and servicing major appliances and electric housewares by the end of January, according to a company spokesman.

The utility reportedly will close five stores and stop appliance merchandising in all other offices. It quit selling merchandise during the war but resumed this operation in 1950.

The spokesman explained that appliance dealers are now "doing an excellent job of selling electrical appliances and the company's merchandising operation represented only a minor part of total appliance sales."

He noted, too, that since the war, more customers have been paying their electric bills by mail and using more conveniently located pay stations. This has resulted in changing retail conditions, he further indicated.

There will be no change in the company's sales promotion program as it pertains to distributors, dealers, and other sales outlets, it was stressed.

Columbus Firm Named New Norge Distributor

CHICAGO — Appointment of Thompson & Hamilton as Norge appliance distributor in Columbus, Ohio, was announced recently by Harold Bull, director of distribution of Norge Div. of Borg-Warner Corp.

T. Kline Hamilton is president of the Columbus company, which was established in 1936. Gail Thompson is vice president and general manager.

The company serves 27 counties in Ohio.

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE
F. TAUBENECK

(Concluded from Page 1, Col. 1) nessman, can go anywhere at any time. No permits, no restrictions. If he goes by car, hotels anticipate his needs with parking facilities, separate motor lobby entrances, and off-hour snacks. If he chooses to go by plane or train or boat, the hotel registration desk—or one of the thousands of fully staffed Travel Information Desks—will help him choose the easiest and pleasantest way to travel the next leg of his journey.

No one asks Bill's politics or religion or social status before registering him for a room. The linen will be clean and whole. American hotels pride themselves on the way they carry on the biggest housekeeping job in the world. Every year they buy 14 million new towels and six million new sheets. Every day four million towels and two million sheets are sent to the laundry.

Ivan reached for a telephone to call a friend he hadn't seen in years but suddenly pulled his hand away. If the wire were

tapped, it would look suspicious for him to be establishing contact with anyone not connected with his official business. The lobby was empty when he wandered downstairs in search of diversion, but he wouldn't have risked talking to a stranger, anyway. The government frowned on possible "corrupting" influences. In one of the public rooms, there was the inevitable political meeting. Having attended hundreds of them, Ivan knew without listening what the speaker was shouting. There was, of course, no other kind of gathering.

What could Ivan do? A play? Months ago he'd been required, as part of his cultural indoctrination, to see the only one now showing—the often-told story of the battle of the quotas with the hero winning the best girl shockworker and the title of Stakhanovite at the same time. Radio? TV? All shows were tailored and previewed and censored by the party. A newspaper? They were all the same—the human interest stories pegged on atrocities of the West, the news columns complying with directives from the Ministry of Propaganda, and the editorial reprinted from Pravda.

Bill can talk to anyone anywhere and say exactly what he pleases. He can get in a political argument with a stranger and, chances are, they'll end by having a friendly drink together. Public rooms in American hotels are not

political indoctrination centers, but the center of community life. Over 60% of our hotels have meeting rooms seating 100 or more, and they can be used for everything from a committee meeting or a high school dance to a forum on current events.

Bill has trouble making up his mind what to do—so much is offered for his enjoyment. He can relax in his room and—whether it has a radio or TV set—can choose any program he likes. If he wants to go out, the hotel will give him an uncensored list of the movies showing in town or, in the larger cities, get him tickets for any kind of play from slapstick to Shakespeare. And hotel newsstands carry papers of many political slants—not just a rubber-stamp of government thinking.

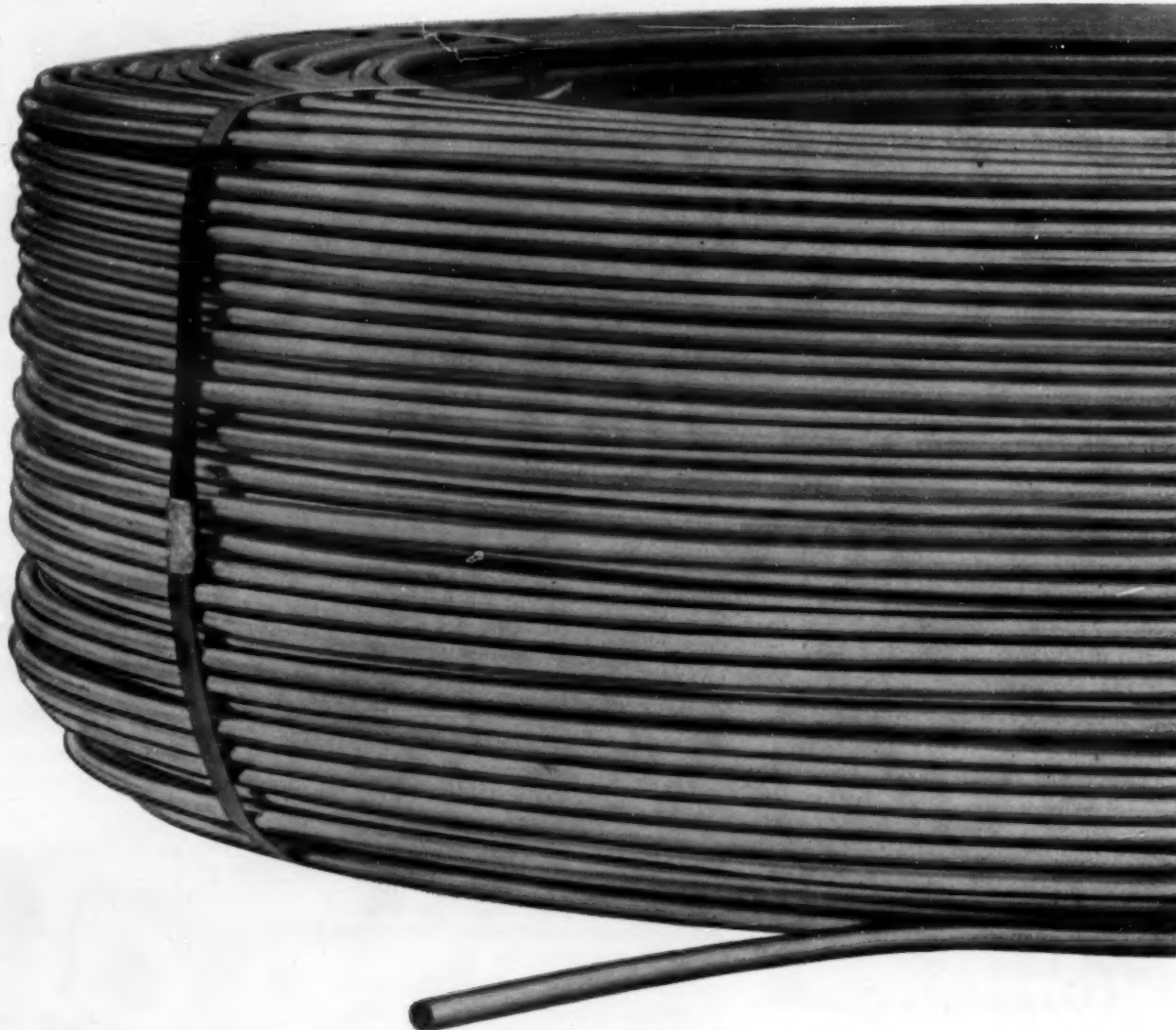
Financial Facts

Nowadays corporations usually have more shareholders than employees.

National City Bank of New York checked reports of America's 100 largest corporations and discovered that the top 100 corporations employed 4,200,000 persons and had 5,240,000 stockholders.

These corporations paid almost as much in taxes as they did in wages and salaries—and four times as much in taxes than dividends.

Average investment was \$14,000 per employee.



Want 4000-ft. coils of dependable tubing?

WHY BUNDYWELD IS BETTER TUBING



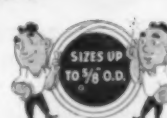
Bundyweld starts as a single strip of copper-coated steel. Then it's...



continuously rolled twice around laterally into a tube of uniform thickness.



and passed through a furnace. Copper coating fuses with steel. Result...



Bundyweld, double-walled and brazed through 360° of wall contact.



NOTE the exclusive Bundy-developed beveled edges, which afford a smoother joint, absence of bead and less chance for any leakage.

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 7, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lopham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Los Angeles 58, Calif.: Tubasales, 5400 Alcoa Ave. • Philadelphia 3, Penn.: Rutan & Co., 1717 Sansom St. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4755 First Ave., South • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 181 Fleet St., E. • Bundyweld nickel and Monel tubing are sold by distributors of nickel and nickel alloys in principal cities.

What Was New

At the Marts

For further information about products pictured on this page, please use key numbers attached and "Information Center" form on page 22.



ELECTRIC COOKING UNITS THAT fold back to the wall are demonstrated by Toni Thurston at the Frigidaire space. The units automatically turn off when folded back.

KEY NO. E-1312

"TOMORROW'S KITCHEN—TODAY" is what Hotpoint calls this all-electric island type display at the Merchandise Mart. While not sold as a unit, all the appliances and materials used will be available this year. Appliances sport a satin chrome finish.

KEY NO. E-1313



GENE LONGMIRE, southern district manager for Quicfrez, Inc. (I.), explains the features of Quicfrez' new 14-cu. ft. upright freezer to a customer, Win Stearns, furniture distributor from Charlotte, N. C.

KEY NO. E-1315



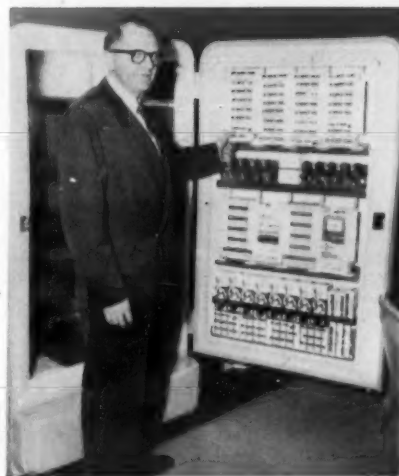
ONLY ONE PLUMBING CONNECTION is needed to hook up this entire electric kitchen center introduced by General Electric Co. Alan G. Jolly, dishwasher and Disposall advertising and sales promotion specialist for G-E, points toward the connections. Included in the stainless steel topped unit are washer-dryer, sink with Disposall, dishwasher, and range.

KEY NO. E-1314



IN GOOD COMPANY is the Crosley 12.5-cu. ft. "Super Shelvador" refrigerator with automatic defrost and water tap in the door. The good company: Shirley Hicks (l.) and Marilyn McMahon.

KEY NO. E-1316



A 25-CU. FT. FREEZER in the same dimensions at last year's 19-cu. ft. model is demonstrated by Carl Telander of Amana Refrigeration, Inc.'s sales department.

KEY NO. E-1317



RHONDA SHERWOOD demonstrates the sliding glass doors on the door shelves of the new "2-Zone" refrigerator-freezer exhibited by Manitowoc Equipment Works. Doors on the box are finished in copper-tone.

KEY NO. E-1318



Long coils are an old story at Bundy.

For years, we've been making them for customers who specified them. So, despite statements that there's something unique about the production of long coils, there really isn't.

If you want long coils of dependable tubing, just come to headquarters for small-diameter tubing, where you can get quick, quantity delivery on Bundyweld steel tubing, in coils up to 4000'—in sizes from capillary to and including 3/4" O.D. On occasion, we've even filled orders for 13,000' coils of Bundyweld in capillary sizes.

Bundyweld means far more than

long-length coils, however. In it, you get the refrigeration industry's most reliable tubing. Inherently reliable because it's the only tubing double-walled from a single strip of copper-clad steel. Inherently reliable because of its solid copper bond throughout 360° of double-wall contact. Inherently leakproof tubing—proved in refrigerators and freezers for over 20 years. It's tubing that comes to you meticulously made and inspected, carefully packaged, refrigeration-clean inside and out. And it comes on schedule.

Need fabrication help?

If you need fabrication help, you'll get

it from engineers who thrive on solving tubing problems. If the problem proves unsolvable, our engineers can often suggest some slight design modification that will result in economical production and unimpaired function. They're resourceful men, as you'll see.

Of course, if you'd like us to take on your fabrication of small- or giant-parts runs, we stand alerted at all times to give you fast delivery of parts, accurately produced, checked, ready in every way for assembly.

Call, write, or wire for any information you'd like. Bundy Tubing Company, Detroit 14, Michigan.



TABLE TOP FREEZER for kitchens that have no extra space is tried for size by Jane Martin and Cecile Hayward of Living for Young Homemakers magazine at the Revco, Inc. booth. Revco's new built-in freezers are seen in the background.

KEY NO. E-1319



EXHIBITING FOR THE FIRST TIME at the winter markets, Foster Refrigerator Corp. showed its new two-temperature box with 11 cu. ft. of refrigerator space at top and 6-cu. ft. freezer below. H. R. Shillin, sales promotion manager, indicates the adjustable shelving in the refrigerator compartment.

KEY NO. E-1320



MANIPULATING THE FROZEN JUICE dispenser in the door of the new Deepfreeze "Imperial 16" upright freezer is S. J. Seibert, export manager for Deepfreeze Div., Motor Products Corp.

KEY NO. E-1321

Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP



Two Sides of Justice Department Antitrust Suit Against Philco

J. M. Otter Explains Philco's Position

Speaking before the Philco distributor convention last week, John M. Otter, Philco vice president, labeled the government suit a "dangerous challenge to established methods of distribution."

"The case is based upon the improvements to our distribution system, which I suggested last August, and which met with the full approval of our distributors and dealers," Otter said.

"The first government attack is upon our basic concept that each distributor should limit his activities to the territories assigned him, that he should not franchise dealers in other areas.

"All we did last August, with your approval, was to put some teeth into our distributor contract. You willingly signed contracts giving Philco the right to buy and ship back to you any Philco merchandise transshipped from your territory.

"This was a practical and simple method of protecting your exclusive right to your respective territories.

"The second Justice Department

argument is against our suggestion that you re-sign your dealers, confining them to their proper functions of being retailers. The complaint says that your retail dealers should be permitted to sell other retail dealers.

"We all know, and the government should know, that when a retail dealer sells to another retail dealer he has by that act become a wholesaler, so the

government is asking you, as a distributor, to sell other wholesalers," Otter further stated.

"The third government contention is that we prevent you from handling competitive products and are lessening competition in the sale of appliances.

"The fact is there is nothing in our distributor agreement that prevents you from wholesaling anything you want."

Text of Suit, U.S. Dept. of Justice vs. Philco Corp.

IN THE UNITED STATES
DISTRICT COURT
FOR THE EASTERN DISTRICT OF
PENNSYLVANIA
Civil Action No. 18216

COMPLAINT

The United States of America, by its attorneys, acting under the direction of the Attorney General of the United States, brings this civil action against the above-named defendant and complains and alleges as follows:

JURISDICTION AND VENUE

This complaint is filed and these proceedings are instituted against the above-named defendant under Section 4 of the Act of Congress of July 2, 1890, c. 647, 23 Stat. 239, as amended, entitled "An Act to protect trade and commerce against unlawful restraints and monopolies," commonly known as the Sherman Act, and under Section 15 of the Act of Congress of October 15, 1914, c. 323, 38 Stat. 736, as

amended, entitled "An Act to supplement existing laws against unlawful restraints and monopolies and for other purposes," commonly known as the Clayton Act, in order to prevent and restrain continuing violations by the defendant, as herein after alleged, of Section 1 of the Sherman Act, and of Section 3 of the Clayton Act.

Philco Corp. (hereinafter referred to as "Philco"), is hereby made defendant herein.

The wholesale distributors of Philco products, not made defendants herein, participated as co-conspirators with the defendant in the violations of Section 1 of the Sherman Act hereinafter charged. These co-conspirators are all those wholesale distributors of Philco products who signed a 1954 "Distributor Agreement" with Philco at or subsequent to the August, 1954, Philco wholesale distributor's convention held in New York City, and are all the Philco approved wholesale distributors that sell Philco products.

The aforesaid wholesale distributor co-conspirators are also parties with the defendant to the unlawful agreements in

Last month the U. S. Department of Justice filed a civil anti-trust lawsuit against Philco Corp., charging the firm with enforcing illegal restrictions on wholesalers and retailers.

Philco officials replied to the charges, denying any illegality in intent or fact, and indicated that the company would fight the government's suit in the courts.

Because a number of readers have indicated an interest in the exact nature of the charges made by the Department of Justice in this suit, the NEWS hereby presents significant parts of the text of the charges as filed recently in the U. S. District Court in Philadelphia.

violation of Section 3 of the Clayton Act hereinafter charged.

NATURE OF TRADE AND COMMERCE

The defendant Philco manufactures and sells in interstate commerce to wholesale distributors located throughout the United States, Philco products which include home radio receivers, phonographs, television receivers, refrigerators, freezers, air conditioners, and electric ranges, as well as accessories and repair and replacement parts for use with said products. The defendant Philco is one of the major manufacturers in the United States of most, if not all, of said products.

With the exception of Philco Distributors, Inc. (P.D.I.), a wholly owned subsidiary of Philco, which acts as the distributor for Philco products in the four largest cities of the United States, Philco sells Philco products to approximately 130 independent wholesale distributors located throughout the United States.

These approximately 130 wholesale distributors in turn sell Philco products to retail dealers, and the retail dealers in turn sell Philco products to consumers. Both the wholesale distributors and the retail dealers sell Philco products in interstate commerce.

From the manufacturing plants of Philco there is a continuous flow in interstate commerce of Philco products to wholesale distributors, thence to retail dealers, and thence to consumers throughout the United States.

VIOLATIONS OF SECTION 1 OF THE SHERMAN ACT

Beginning in or about August, 1954, and continuing up to and including the date of the filing of this complaint defendant Philco and the co-conspirators have been and are now engaged in an unlawful combination of conspiracy, and have been and are now parties to unlawful contracts, agreements, and understandings, among themselves and with retail dealers, in unreasonable restraint of interstate and foreign trade and commerce in Philco products, all in violation of Section 1 of the Sherman Act as amended. The defendant is continuing and will continue said offenses unless the relief hereinafter prayed for is granted.

The unlawful combination and conspiracy referred to in the preceding paragraph of this complaint consist of a continuing agreement, understanding and concert of action among the defendant and the co-conspirators, the substantial terms of which are that they agree that:

(a) Wholesale distributors of Philco products will not sell or ship such products outside of the specific sales territory in the United States allotted to the wholesale distributor by Philco, and will not sell or ship such products to any customer located in a foreign country;

(b) Wholesale distributors of Philco products will not compete in the sale of such products with other wholesale distributors of Philco products;

(c) Wholesale distributors of Philco products will require retail dealers to whom they sell Philco products to agree to resell such products to consumers only;

(d) Philco may purchase, for the account of the distributor and return to the distributor, all Philco products which have been sold and shipped by either (1) the wholesale distributor or (2) a retail dealer customer of the wholesale distributor, outside of the allotted sales territory of the wholesale distributor who originally purchased the products from Philco, and the wholesale distributor will be liable to Philco for the repurchase price of such products, plus freight;

(e) Wholesale distributors will refrain from selling Philco products to retail dealers for resale to other retail dealers;

(f) Wholesale distributors will refrain from selling Philco products to any retail dealer who is not approved as a retail dealer of such products by Philco and the wholesale distributor located in the same sales territory in which the retail dealer is located;

(g) Wholesale distributors of Philco products will submit to Philco detailed reports of sales, shipments, and inventories, and will submit to rigorous inventory controls by Philco, for the purpose of enabling Philco to discover any departure by a wholesale distributor from the terms of the conspiracy, and for the purpose of eliminating the need for price cutting and liquidation of Philco stocks;

(h) Retail dealers of Philco products will not sell Philco products to other retail dealers or to any person other than a consumer.

The unlawful contracts, agreements, and understandings referred to in paragraph 9 of this complaint are among the defendant and co-conspirators and with retail dealers and embody the specific substantial terms of the unlawful combination and conspiracy as set forth in subparagraphs (a) to (h), inclusive, of the preceding paragraph of this complaint.

For the purpose of carrying out the aforesaid unlawful combination and conspiracy and the aforesaid unlawful con-

tracts, agreements, and understandings, the defendant and co-conspirators, by agreement and concert of action, have done the things which as hereinabove alleged they conspired and agreed to do.

VIOLATIONS OF SECTION 3 OF THE CLAYTON ACT

Beginning in or about August, 1954, and continuing up to and including the date of the filing of this complaint, defendant Philco has sold Philco products to wholesale distributors on the condition, agreement, and understanding that said wholesale distributors shall not use or deal in any similar products of any competitor of the defendant Philco, with the purpose and effect of substantially lessening competition in the sale of such products in interstate commerce and in violation of Section 3 of the Clayton Act as amended.

The unlawful combination and the unlawful contracts, agreements, and understandings hereinabove described have had the following effects, among others, as intended by the defendant and co-conspirators:

(a) Competition, including price competition, between wholesale distributors in the sale of Philco products to retail dealers has been eliminated;

(b) Wholesale distributors have been prevented from selling Philco products in foreign commerce;

(c) Retail dealers have been prevented from selling Philco products to other retail dealers;

(d) Wholesale distributors and retail dealers have been prevented from selling Philco products owned by them to customers of their own choice;

(e) All retail dealers, including those retail dealers who cut prices, not approved as retail dealers of Philco products by Philco and the wholesale distributor of Philco products located in the same sales territory in which the retail dealer is located, have been prevented from acquiring Philco products for resale and thereby eliminated as competitors in the sale of Philco products;

(f) Competition in the sale to wholesale distributors of products competitive with Philco products has been eliminated.

Wherefore, the plaintiff prays:

1. That the aforesaid combination and conspiracy and the aforesaid contracts, agreements and understandings of the defendant and co-conspirators in unreasonable restraint of interstate and foreign trade and commerce in Philco products be adjudged and decreed to be unlawful and in violation of Section 1 of the Sherman Act;

2. That the aforesaid sales by defendant Philco of Philco products upon the condition, agreement or understanding that the purchasers will not deal in any similar products of any competitor of Philco be adjudged and decreed to be unlawful and in violation of Section 3 of the Clayton Act;

3. That the defendant Philco and its officers, directors, agents, representatives, and all persons and corporations acting or claiming to act on its behalf be perpetually enjoined from being a party to agreements, contracts, relationships, understandings, or practices having the purpose or effect of continuing, reviving, or renewing any of the violations of the Sherman Act or the Clayton Act hereinbefore set forth and described;

4. That the defendant Philco and its officers, directors, agents, representatives, and all persons and corporations acting or claiming to act on its behalf be perpetually enjoined from imposing or attempting to impose any limitation or restriction upon the persons to whom or the territory within which wholesale distributors or retail dealers of Philco products may sell such products;

5. That the defendant Philco be required to advise all wholesale distributors of Philco products and all retail dealers in Philco products that they may sell such products to whomsoever and wherever they please;

6. That the defendant Philco and its officers, directors, agents, representatives, and all persons and corporations acting or claiming to act on its behalf be perpetually enjoined from requiring or attempting to require wholesale distributors of Philco products to submit to any inventory control requirements of Philco;

7. That the defendant Philco and its officers, directors, agents, representatives, and all persons and corporation acting or claiming to act on its behalf be perpetually enjoined from making a sale or a contract for the sale of Philco products upon the condition, agreement, or understanding that the purchaser thereof shall not use or deal in similar products of any competitor of Philco;

8. That the defendant Philco be required to advise all wholesale distributors of Philco products that they may distribute one line of Philco products without any requirement that they also distribute any other line of Philco products, and that they may also distribute any product or products of any competitor or competitors of Philco without loss of their Philco distributorship by reason thereof.



* Every advantage that has made Tecumseh a leader in the compressor field is sealed into this new and complete line of integral hermetics.

Tecumseh offers FULL TONNAGE

HERMETIC COMPRESSORS for year-around air conditioning

As a furnace manufacturer, you can now take advantage of a new freedom of design never thought possible in year-around air conditioning. TECUMSEH'S new line of hermetic compressors offers you top efficiency under the toughest conditions. At 120° ambient and normal ACRMA conditions they will operate properly at 90% of rated voltage (207 v). By changing only electrical components, you can use the basic compressor for either water or air cooled applications. Single or 3 phase is available, giving you complete flexibility. Other advantages include size and weight making this line particularly attractive. See them soon, and discover for yourself that Tecumseh has the best job for your application at a price you cannot afford to overlook.

ALL NEW		
1½ H.P.	2 H.P.	3 H.P.
HERMETIC COMPRESSORS		

THE INSIDE STORY

Bulletin 100 contains detailed information and specifications. Send for your copy today.

THE PHILADELPHIA STORY

Booth 62 at the Heating and Ventilating Exposition in Philadelphia will feature this new line of Tecumseh Hermetics.



TECUMSEH PRODUCTS • LEADERSHIP WITH FORESIGHT

TECUMSEH, MICH.

Company

The World's Largest
Producer of Compressors
for the Refrigeration
Industry

EXPORT DEPT.: P. O. Box 2280, 24530 Michigan Ave. • W. Dearborn, Mich.

What Was New In Room Air Conditioning At the Winter Mart

Key numbers have been placed with the pictures for your convenience. If you wish further information on products pictured here, please refer to the key numbers and use the information form on page 22.



NEW AIR-COOLED CONDENSER for installation outside the home and which operates with a unit in the furnace was introduced by O. A. Sutton Corp. Rog Burch (l.) of the Sampson Co., Chicago distributor for the Vornado line, gets the highlights from Fred Ricketts, Sutton advertising manager.

KEY NO. E-130



ELECTROSTATIC FILTER in this 1-hp. Deep-freeze air conditioner can be washed under a faucet and then replaced. The new unit also offers three-position mounting and colored pushbuttons.

KEY NO. E-134



CREATING EXCITEMENT at the RCA Victor space in the Furniture Mart was this 3/4-hp. Console unit with wood panel front on a metal cabinet and strip heater for heating. Operating the pushbutton controls at the top is Audrey Becker, who creates a little excitement on her own account.

KEY NO. E-131



REVERSE CYCLE HEATING is a new feature of this 1-ton room air conditioner introduced by International Harvester Co. Proud to be selling it are Joe Boone (l.), I-H district manager for refrigeration sales in Chicago, and Bill Geddes, salesman for RCA Distributors in Chicago.

KEY NO. E-132



BLONDE OAK, mahogany, and birch wood fronts are available on the new 3/4-hp. air conditioner exhibited by Sub-Zero Freezer Co. Waldron Brower, southwestern distributor from Dallas, Texas, points out that the panel across the lower front is removable so that matching fabric can be installed.

KEY NO. E-133

Redmond
MICROMOTORS
One of largest stocks
in the world!

FACTORY DISTRIBUTORS
CYCLO-FREEZ CORP.
MARVIN L. "FERGIE" FERGESTAD
6318 Cambridge, Mpls. 16, Minn.
West 9-6794



AN ADAPTER KIT for installing a room air conditioner completely inside the room to conform to building management restrictions was explained to Mart visitors by Henry Hofmann, Chicago branch manager for the Gibson Refrigerator Co.

KEY NO. E-137

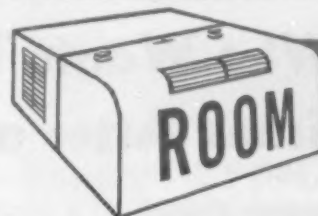


CHECKING THE COOL AIR VOLUME in General Air Conditioning Corp.'s new 2-hp. home air conditioner that installs like a floor furnace is John N. Paulus, general sales manager for the company. He emphasizes that it can be easily installed by anyone.

KEY NO. E-138

SLIDE OUT REPLACEABLE FILTER, simplified controls, and flush mounting are incorporated in the 1955 room air conditioner line shown by the Dearborn Stove Co. Discussing their 3/4-hp. unit are E. S. Kleinmann, Dearborn's vice president in charge of sales (l.), and C. D. Havens, regional sales manager for the northern half of the U. S.

KEY NO. E-1310



AIR CONDITIONERS



2-TON VORNADO room air conditioner featuring balanced mechanical cooling, vortex circulation, and maximum dehumidification is demonstrated by Fred Ricketts, advertising manager for the O. A. Sutton Corp.

KEY NO. E-139



WESTINGHOUSE' NEW CASEMENT window room air conditioner with pushbutton controls is operated by Myrt MacAdam at Westinghouse Electric Co.'s new space in the Merchandise Mart. The 3/4-hp. unit has adjustable grille and can be mounted flush with the outside if desired.

KEY NO. E-1311

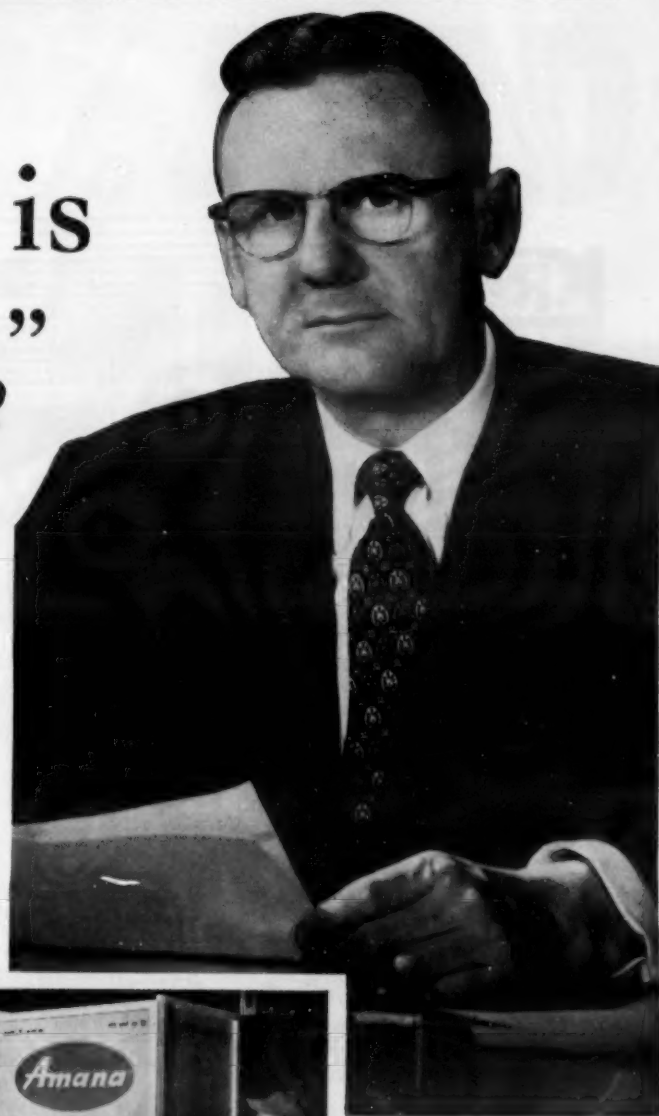
"Our face is our fortune,"

says George C. Foerstner,
Amana Executive Vice Pres.

"Or let's say it's a big part of our fortune,"
continues Mr. Foerstner.

"We prize the flawless finish of our Food Freezers highly — and so do housewives. In fact, as much care is taken in the manufacture of this finish as in any other part of the unit.

"We can't afford to have it marred after it leaves us. That's why we ship all our products in Atlas Plywood containers."



Gleaming beauty. Amana's pride in the shining finish of its Food Freezers is understandable. To protect these gleaming beauties which weigh 300 pounds, Amana sought the advice of Atlas Plywood packaging engineers. It was obvious that, if not properly packed for shipping, the weight could prove destructive when the unit underwent the jolts, bumps and strains of travel. What's more, the inside mechanism could be damaged.



Atlas Plywood Engineers designed this sturdy, lab-tested container that will absorb the shock of shipment, warehouse handling and dealer delivery. Amana not only gains protection by this packaging but saves plenty of money besides; the container is light-weight as well as strong and its strength is so dependable Amana can now pack up to the load limits. No waste space in freight car or in storage.

What about you? Do you risk wasted dollars due to product damage or increased shipping costs from unreliable containers? Send for free informative, illustrated 24-page booklet, "How Atlas Plywood Cuts Your Shipping Costs Safely." — or see your Atlas Plywood representative (Classified Telephone Directory). Learn about the remarkable testing laboratory where Atlas Plywood containers win their lab-tested label. Atlas Plywood Corporation, Dept. ACR-5, 1432 Stadler Building, Boston 16, Massachusetts.

Atlas Plywood

CORPORATION

FROM AMERICAN FOREST TO FINISHED PRODUCT
PLYWOOD CONTAINERS • FLUSH DOORS • HARDWOOD PANELS



Published Every Monday by
BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich.
Telephone Woodward 2-0924.
New York Office: 521 Fifth Ave.,
Telephone Murray Hill 7-7155.
Chicago office: 134 S. LaSalle St.,
Telephone Franklin 2-8093.
Ohio Office: Commercial Bank Bldg.,
Berea, Ohio. Telephone Berea 4-7719.

Subscription Rates: U. S. and Possessions and Canada: \$6.00 per year; 2 years, \$9.00; 3 years, \$12.00. All other countries: \$10 per year. Single copy price, 40 cents. Ten or more copies, 30 cents each; 50 or more copies, 20 cents each. Send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

C. DALE MERICLE, *Associate Editor*

JOHN SWEET, *Assistant Editor*
HUGH MAHAR, *Assistant Editor*
GEORGE HANNING, *Assistant Editor*
MARGARET DEAN, *Assistant Editor*
JOY SLAUGHTER, *Editorial Assistant*

E. L. HENDERSON, *General Manager*
ROBERT M. PRICE, *Adv. Mgr.*
ALLEN SCHILDHAMMER, *West. Adv. Mgr.*
RICHARD E. CLEARY, *Adv. Rep.*
ALICE M. BARROW, *Advertising Secy.*
WALTER J. SCHULER, *Production Mgr.*
WARREN L. JONES, *Circulation Manager*
MARILYN GASS, *Subscription Manager*

Member, Audit Bureau of Circulations.
Member, Associated Business Publications.
Copyright 1955, Business News Publishing Co.

VOL. 74, No. 3, SERIAL No. 1,348
JANUARY 17, 1955

Calculate your own grudges against dishwashing against the gripes of 150 million wives, husbands, and kids—and an automatic antiseptic mechanical dishwasher would appear to be the Best Deal since the Louisiana Purchase.

BE YOUR OWN BEST SALESMAN!

**WRITE NOW
FOR
BULLETIN U-29**

ONE UNICON
serves up to 16 compressors
WITHOUT A DROP
OF WATER*

*UNICON is a Remote-Type Air-Cooled Condenser

KRAMER TRENTON CO. • Trenton 5, N.J.

Lamport-Fox-Prell & Dolk Inc.
South Bend 5, Ind.

Surry,
England

Editor:

Lowell B. Mason, senior commissioner of the Federal Trade Commission, tickled us with this bit of whimsy at an Association of Commerce meeting here. He told of Ed Wynn—playing as a handkerchief manufacturer—and saying, "We're always sticking our business in other folk's noses."

I'm just sending this along as a meager and partial payment for the many good laughs and thoughts that I have received from your Inside Dope.

CLEMENT B. HAINES

Editor:

I was interested to read of the visit of West German trade paper editors to your offices under the heading of "FINE GERMAN PEOPLE."

I travel frequently to Germany, and am always told how much more popular the British forces and civilians are than their American or French counterparts.

Could it be that the Germans don't like either of us but it would not pay them to say so?

T. THOMAS



Easy To Show Makes It Easier To Sell

REPRESENTATIVES of the Thermal Co., Inc., St. Paul distributor for Brunner Mfg. Co., show their new method of demonstrating the Brunner-Metic semi-hermetic refrigeration condensing unit. Mounted in a station wagon, the unit is ready, at a minute's notice, for demonstration at the customer's door.

McMillan Forms Water Treating Firm

PORTLAND, Ore.—C. C. McMillan, who has been in the boiler and equipment field in the east and middle west for the past 16 years, has announced the formation of C. C. McMillan Industrial Supplies for the manufacture of "Kemaloid," a new boiler and cooling water treatment.

Kemaloid was developed by the company head working in conjunction with west coast chemical engineers. Manufactured from Douglas Fir waste wood, the product is used to remove and prevent scale, corrosion, oil deposits, foaming and priming, and embrittlement tendencies in boilers and cooling water systems.

Kemaloid is described as "a carefully compounded dry powder blend of the best organic and inorganic chemicals available." Simplicity and ease of application is given as an important feature of Kemaloid, "making its use fully effective in any plant, without complicated testing procedures and by non-chemically trained personnel."

Kemaloid is a guaranteed product covered by Products Liability Insurance and it contains no harmful acids, caustics, or other dangerous ingredients, according to

the manufacturer. It is pre-packaged in fibre drums up to 400-lb. capacity.

"The heavy chemicals used in Kemaloid partially react with scale-forming minerals in water, inactivating them to a degree where the colloidal action of the organic components can keep them in a completely fluid state, preventing organized scale or other deposits," the company explained.

McMillan said it is planned to appoint distributors for complete coverage of the U. S. and Canada in the near future to meet requirements.

Flexible Tubing West Coast Unit Moves to New Site

GUILFORD, Conn. — Flexible Tubing Corp.'s expanded West Coast operation is now located at 12230 West Olympic Blvd., Los Angeles, the company has announced.

The new site houses Flexible Tubing's western offices, subassembly plant, and warehouse. Occupying approximately 4,500 sq. ft. in a one-story building, the expanded operation will permit the company to better serve its distributors in the 11 Western states and to offer more rapid and direct service on its complete line of flexible ducting to the original equipment market and the West Coast aviation industry.

The company's western office was formerly at 416 Citizens Bank building, Pasadena. Philip H. Marsh heads the western operation.

Elkhart Firm Changes Name, Expands Operation To Include Refrigeration Parts, Equipment

ELKHART, Ind.—Elkhart Products Corp. is the new name of the firm formerly known as Elkhart Screw Products, Inc.

The firm has expanded its manufacturing activities to include refrigeration and air conditioning parts, strainers, and driers; copper return bends; and copper headers, in addition to automatic screw machine parts and machining and assembling operations.

A new 25,000-sq. ft. plant has been built to accommodate the additional manufacturing activities. Management, personnel, and address—1255 Oak St.—remain the same.

Shreveport Refrigeration Promotes Adams, Phillips

SHREVEPORT, La. — Ray Phillips, who started with Shreveport Refrigeration Co., Inc., in June of 1949 in the service department, has been named store manager of the company's downtown Shreveport store at 411 Louisiana Ave., succeeding Richard Adams, who has been promoted to general appliance manager of the company.

Adams will supervise the operations of all the company's retail stores in Bossier City, Sunset Village, in downtown Shreveport, and at 1100 Texas Ave. He joined the company Dec. 13, 1948.

Wolverine Tube Names Scott for Wayne County

DETROIT — Richard M. Scott has recently been appointed Wolverine sales representative in Wayne county, Mich., J. H. Smith, east central district sales manager for Wolverine Tube, Div. of Calumet & Hecla, Inc., announced.

His headquarters will be in the firm's general sales office, 1850 Guardian Bldg., Detroit.



R. M. Scott



Service & Supplies

Central States Service Clinic Planned By Milwaukee RSES March 11-13

CHICAGO — Under sponsorship of the Milwaukee Chapter of the Refrigeration Service Engineers Society, the Central States Service Clinic's annual meeting will be held in Milwaukee's Wisconsin hotel on March 11, 12, and 13, 1955, it was announced here recently.

Lee Miles, general chairman of the Service Clinic, and a number of Milwaukee Chapter members are beginning to set up plans for the meeting.

"The first service clinic held in Chicago proved to be the type of education that servicemen want and need for their daily work," it was noted.

"Those manufacturers who presented the topics at this first meeting were pleased with the informal manner in which it was conducted."

R. L. Hendrickson, executive sec-

retary of the Central States Service Clinic, reports that much was learned about the management and scheduling of each clinic which will assure an even better and more enlightening meeting when it is presented in Milwaukee.

Langsenkamp To Handle Bohn Free Cutting Brass Rod In Indianapolis Area

INDIANAPOLIS—F. H. Langsenkamp Co. here, has arranged with the Bohn Aluminum & Brass Corp., Detroit, to handle Bohn free cutting brass rod in the greater Indianapolis area, according to a joint announcement made by T. W. Kuhn, Bohn vice president, and Fred C. Greer, Jr., manager of the Langsenkamp company's metals division.

20-Year Guarantee!

ON THE WETTED DECK SURFACE



HALSTEAD & MITCHELL COOLING TOWERS

2 to 100 tons

"Built like a Battleship"—economical, lastworthy. Pressure-treated wood in wetted deck surface guarantees against rotting or fungi growth. Stainless steel fan and shaft, plus individual cabinet coatings of Vinsynite, Vinyl Aluminum and chlorinated rubber, add important years of life.

Wholesalers in Principal Cities

Halstead & Mitchell

BESSEMER BLDG. PITTSBURGH 22, PA.

Here's Harry Alter's DEPENDABOOK No. 161

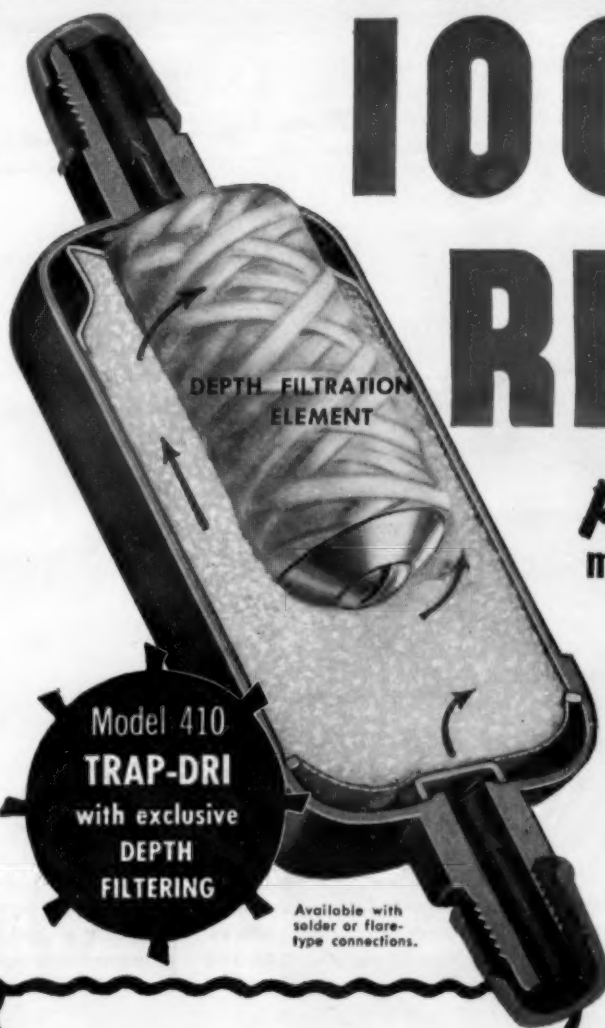
REFRIGERATION PARTS and Supplies plus

Electric-Motor Parts, Air Conditioning and Heating

There are over 9,000 items illustrated, described and rock-bottom-priced in our newest DEPENDABOOK. So—get and use this money-saver! Write for your copy to

The HARRY ALTER CO., Inc.

1728 S. Michigan Ave., Chicago 16, Ill.
134 Lafayette St., New York 13, N. Y.



Model 410
TRAP-DRI
with exclusive
DEPTH
FILTERING

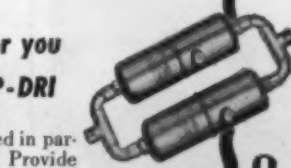
Available with
solder or flare-
type connections.

These plus features assure trouble-free service

- REMOVES MORE MOISTURE — PA 400 adsorbs water and acid physically instead of chemically. Tests prove complete moisture adsorption at temperatures as high as 160° F. Prevents freeze-ups, corrosion and copper plating.
- EXCLUSIVE DEPTH FILTRATION — desiccant or dirt cannot get through because filter element is located at outlet end. Trap-dri has more filtering surface than any other drier on the market.
- NO APPRECIABLE PRESSURE DROP — less than 1 lb. at all times.
- WORKS ANYWHERE — under any condition, Trap-Dri shell and fittings will withstand over 2000 lbs. pressure.
- HERMETICALLY "FACTORY-SEALED" AGAINST MOISTURE.

Exclusive money-saver for you "TWIN" TRAP-DRI

Two Trap-Dries factory-connected in parallel operate as a single unit. Provide same capacity as much larger units, eliminating heavy castings, larger fittings and bulky, hard-to-assemble units, and saves you money.



Wholesale Only
"Harry Alter gives you snappy service!"

100% ACID REMOVAL

plus complete moisture adsorption makes TRAP-DRI your BEST BUY

ELIMINATE corrosive acids (and moisture at the same time) and you end a major source of refrigeration trouble! Never before has such positive protection against corrosive acids in refrigeration systems been available! Water and acid are adsorbed physically — no release of any substance to refrigerant circuit. With amazing PA 400 silica gel, Trap-Dri adds years of profitable trouble-free performance . . . greater guarantee of safety to any refrigeration installation. HERE'S PROOF!



Removes and prevents formation of acids that corrode iron, copper, brass, aluminum — A very severe test by a national organization proves conclusively that acid was completely removed, thus assuring 100% protection against troublesome corrosive action.

IF YOU MAKE, INSTALL OR SERVICE REFRIGERATION SYSTEMS — A-P TRAP-DRI IS THE BEST PROTECTION MONEY CAN BUY! Order from your jobber NOW.



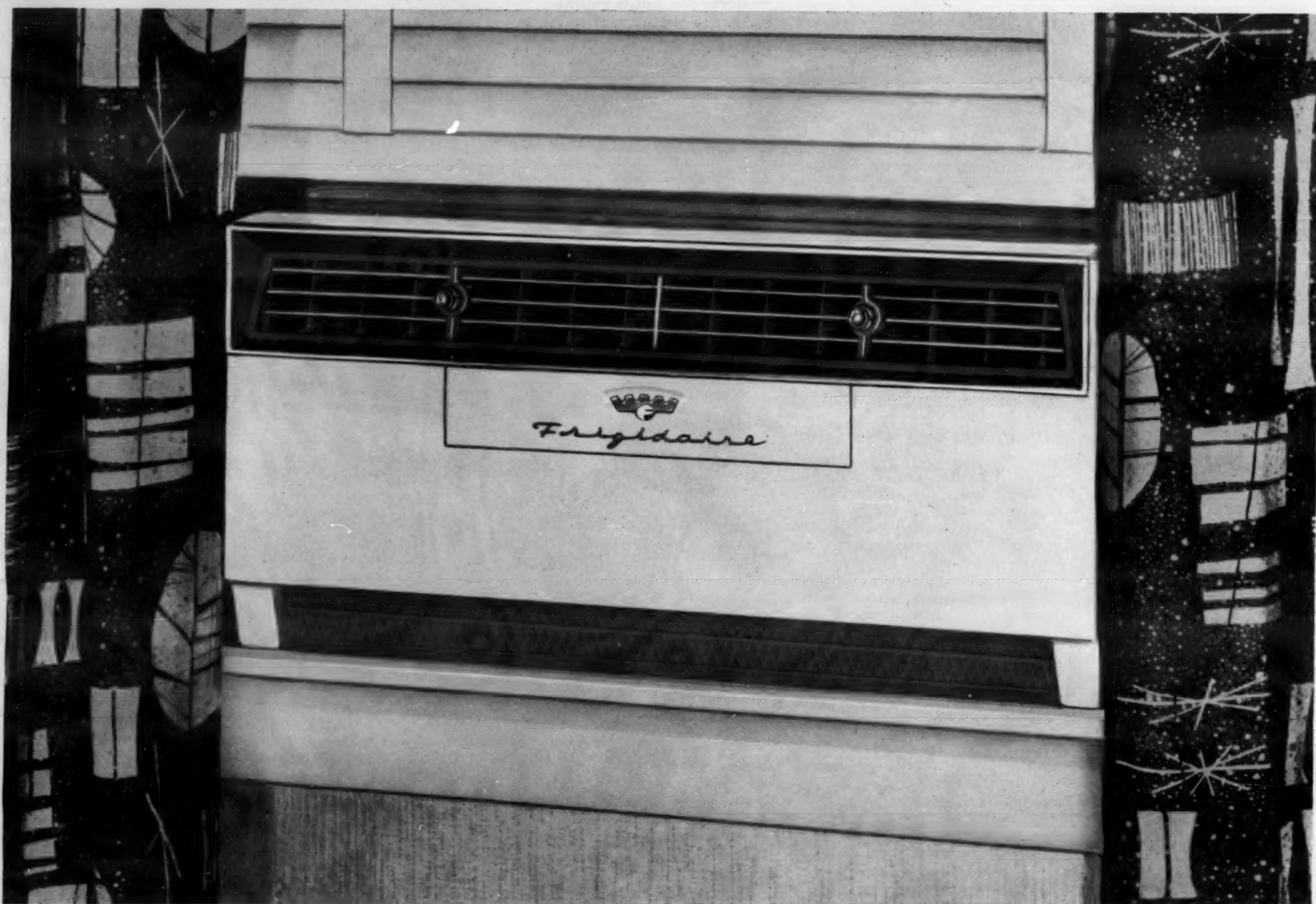
DEPENDABLE Controls

For Air • Liquids • Gases • Refrigerants

A-P CONTROLS CORPORATION

2460 N. 32nd Street, Milwaukee 45, Wisconsin
In Canada: A-P Controls Corp., Ltd., Cooksville, Ontario
For Export: 13 E. 40th St., New York, N. Y., U.S.A.

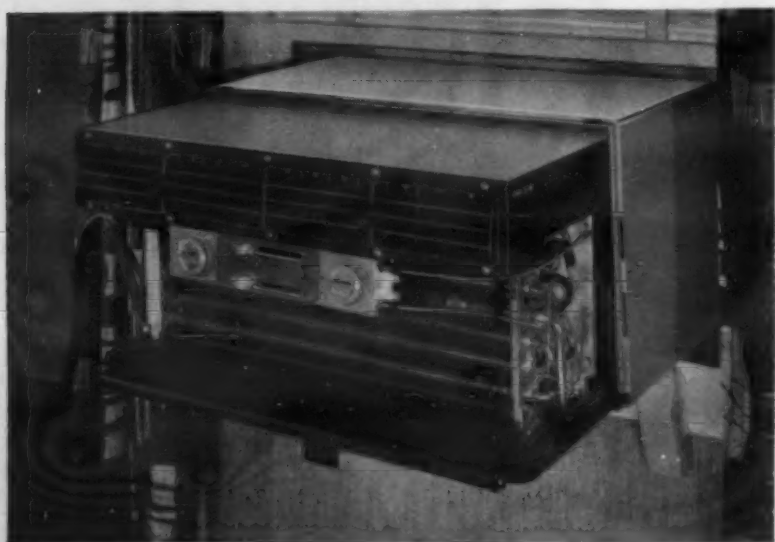
NEW FRIGIDAIRE ROOM ARE TWIN-POWERED



New beauty . . . new compactness . . . new operating ease . . . are all proof that the sparkling new 1955 Frigidaire Room Conditioners are loaded with exciting sales appeal. Four basic models cover the needs of homes, offices, apartments, shops, institutions, hospitals, etc. Compact Super Series in two popular capacities, $\frac{1}{3}$ and $\frac{1}{2}$ hp. Either Super model will fit both casement and

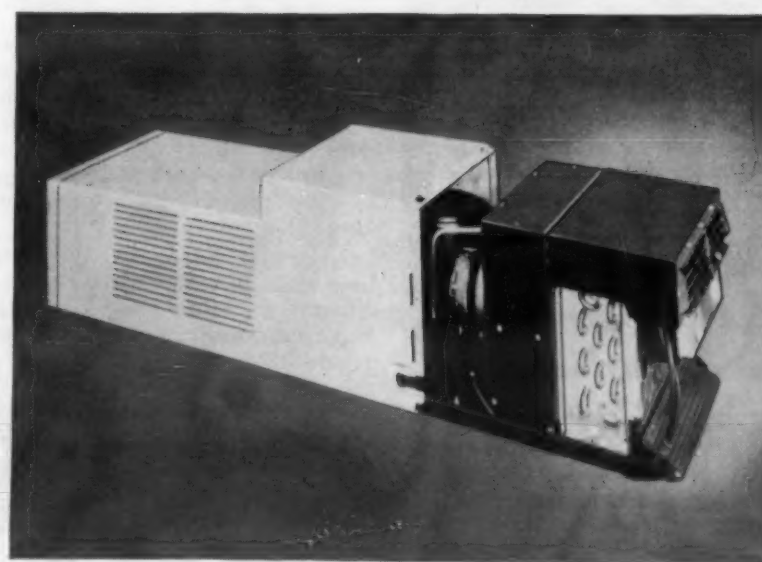
double-hung windows. Deluxe Twin Series, in $\frac{3}{4}$ and 1-hp models, offer outstanding new comfort and convenience. Thermostats optional on Deluxe models—can be added to any model in minutes where local utility permits automatic operation. Complete line includes 1-hp Twin for 115-volt current. Models are priced competitively and are designed to sell on sight.

COMPLETE UNIT SLIDES OUT OF CABINET FOR EASY "IN-THE-ROOM" SERVICING



Easy slide-in installation of twin unit

Installation of the 1955 Frigidaire Room Conditioners is truly a "serviceman's dream". It now consists merely of installing a lightweight metal shell in the window frame. This is done easily, and entirely from the inside of the room! Then the entire operating unit simply slides into the shell. And, if service is ever needed, the mechanism can be slipped from its shell in seconds, right out into the room where it can be worked on conveniently. Illustration at the left shows preliminary step in installing Deluxe model Room Conditioner. Shell is in place in the window, and the mechanism is slid into place. This new "slide-in, slide-out" engineering also applies to Casement-type models as shown in illustration at right.



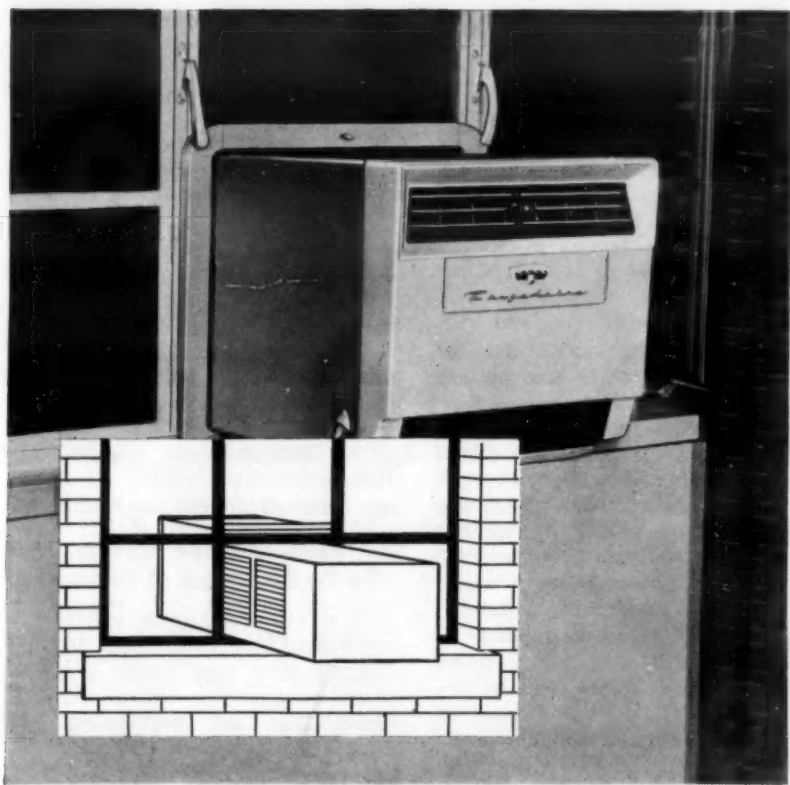
Casement unit mechanism slides into shell, too

Flush or regular mounting. Still another "plus" in the sales-worthy new 1955 Frigidaire Room Conditioner models is the ability to meet any customer's wants in regard to manner of mounting. Dealers can

offer customers two choices: either flush with drapes, or regular balanced mounting. Whichever manner he chooses, proper air distribution and full cooling power are assured.

CONDITIONERS FOR LOCAL WEATHER

Completely redesigned and restyled with an exclusive comfort story sales powered for local selling



Casement Type Conditioner installs without removing window muntins or mullions

At last, an attractive casement window conditioner that can be installed without tearing up the window. The new Frigidaire $\frac{1}{2}$ and $\frac{3}{4}$ hp units install by removing one pane of glass. And for real flexibility, they may also be installed in regular double-hung windows.

Now, from Frigidaire, comes a completely new idea in localized comfort control that can't be claimed by any other window room conditioner made. With two complete cooling systems inside, this unit gives Frigidaire Dealers in every part of the country a consumer appeal that can't be matched.

For potential buyers in moderate climates it means plenty of cooling power for hot spells with instant adjustment to half the cooling power on days that are just warm and muggy.

For potential buyers in southern climates it means ideal comfort all summer long — yet it permits "half-power" cooling that stretches usefulness way into the fall and early spring for cool comfort during more

months in the year.

Yes, Frigidaire Room Conditioners are "Twin-Powered for Local Weather" to tailor cooling to exact comfort needs.

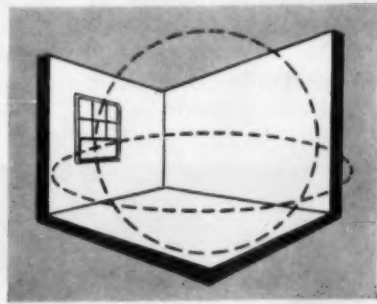
Extra sales power in savings on electric bills

And think what "Twin Powered" means in terms of cost of operation! On moderately hot days just one cooling system is used. Thus the owner uses half the power . . . and saves up to half on his electric bills.

Add together the comfort story and the money-saving story and you have something that a Frigidaire Dealer can really get his teeth into . . . an outstanding exclusive that can really be advertised and

promoted at the local level . . . a sales-powered extra that can't fail to capture a bigger share of the air conditioning market.

New "Magic Guide" personalizes control of "Great Circle Cooling"



Now the sales-winning comfort magic of Frigidaire's exclusive "Great Circle Cooling" can be adjusted at the touch of a finger.

In seconds the user can set up the healthful, draft-free air circulation that will fill any shape room with ideal comfort regardless of window location, and readjust air flow instantly, whenever he wishes.

The secret is in the control knobs that set Frigidaire's exclusive horizontal and vertical grilles in an infinite number of positions. The owner can instantly direct air at the exact angle he wants.



Exclusive "Finger tip Tuning" makes exact comfort control easy

Hidden behind a convenient panel are the unique new sliding controls that operate fresh air intake and powerful, effective stale air exhaust. Dials at either side turn condi-

tioner on and off, operate fan and permit manual regulation of temperature. Here's a convenience and appearance "plus" that's packed with real sales power.

Outstanding new sales-building plans and merchandising aids to spark your drive for air conditioner sales

Contact your Frigidaire Branch or Distributor at once for details of plans to help you inventory and display Frigidaire Room Air Conditioners.

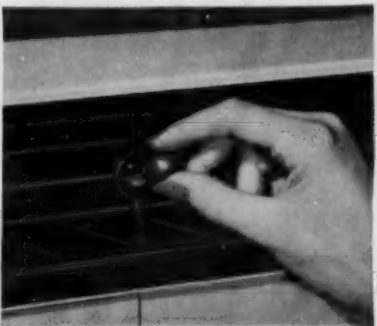
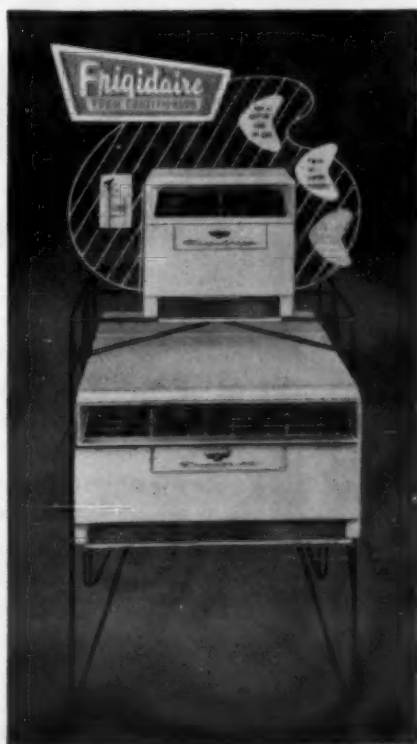
Ask about the special offer on Frigidaire's exciting new "ready to set up"

Room Conditioner selling stand which displays two units in only 5 sq. ft. of floor space.

Get the complete story on why Frigidaire Room Conditioners are the line to push in 1955.

NOTICE: A limited number of Commercial and Air Conditioning Dealerships are now available. For information write:

L. W. Smith, Commercial Sales Manager
Frigidaire Division, GMC
Dayton, Ohio



At the flick of a finger the up-and-around flow of air can be tailored to fill every corner with cool, filtered, dehumidified comfort. There will be no hot and cold spots, no stale, stagnant corners, no chilling drafts. It means that everyone in the room will always be surrounded in crisp, clean comfort. Another sales-powered Frigidaire feature that only Frigidaire offers.

Extra sales power in big promotion push

The 1955 Frigidaire Room Conditioners are being dramatically presented in a colorful, dynamic ad campaign spearheaded by Arthur Godfrey on TV and radio and including newspaper, national magazine and trade advertising. And there's also a world of sales promotion materials for effective selling at the local level.


Frigidaire Conditioners
BUILT AND BACKED BY GENERAL MOTORS

Trade Practice Conference

Many Litigations Can Be Avoided by Industry Committee Meeting with FTC
To Establish Specific Rules, Procedures for Particular Field

MIAMI BEACH, Fla.—Establishing and abiding by fair trade practice rules is a better and more effective way of "cleaning house" in an industry than by bringing complaints against individual law violators, Robert T. Secrest, Federal Trade Commissioner, indicated to members of the Refrigeration & Air Conditioning Contractors Association at their recent convention here.

Secrest explained to the contractors what trade practice rules are and how industry groups can go about establishing such rules for their particular field.

W. Ray Kromer, executive vice president of RACCA, indicated that the association is interested in establishing such rules and would soon take the initial steps to do so.

Secrest emphasized that trade practice rules fall into two classifications. The first are mandatory rules that clarify Federal law in terms applicable to a particular industry. The second are statements of what the industry considers to be fair practices, which its members voluntarily agree to follow.

"The Federal Trade Commission derives no personal pleasure in the

issuance of complaints against those whom we think are violating acts of Congress," Secrest declared.

"We would be happier if all individuals and business organizations lived up to the letter and spirit of the laws we are sworn to uphold.

"Many times the law is violated solely because the law is not known. We are confident that if the members of an industry participate in the making of rules which, for the most part, restate and clarify the law, they will better know the law, and, knowing it, will, in general, be anxious to follow it.

"Our objective is not to make trouble for the members of an industry, but to assist the members of an industry, in every way possible, to avoid trouble.

"We believe that the trade practice conference has great merit and results to date clearly indicate that many industries agree with us. At the present time, 161 industries have participated in trade practice conferences and now have in effect for their guidance trade practice rules. . . .

"Rules promulgated by the commission for an industry under this procedure are classified into two groups—Group I and Group II.

The great bulk of rules usually fall within the Group I classification.

Group 1 Rules

"Group I rules are those which condemn as unfair and unlawful, practices which are deemed to be violative of the laws administered by the commission as such laws have been interpreted by the commission and the courts. . . .

"When it is considered to be in the public interest, proceedings will be initiated by the commission against those in the industry who violate these rules where the violation also meets the requirements as a violation of law.

"In effect, Group I rules codify and clarify for the industry the existing laws applicable to it. They lend concreteness and meaning to the terms of the statutes.

"The chairman of our commission, Edward F. Howrey, concisely defined trade practice rules . . . when he said, 'They are not substantive rules having the force and effect of law. They are in the nature of advisory opinions—an attempt by the commission, for the guidance of businessmen, to interpret the various statutes administered by the Commission in lan-

Commercial Refrigeration

Fair Trade Questions and Answers

Anyone who feels that he is getting gypped or is being subjected to unfair competition can complain to the Federal Trade Commission, Secrest told the refrigeration contractors in reply to questions from the floor following his talk. Letters from aggrieved individuals or companies set in motion 99% of the unfair trade practice complaints the commission files, he declared.

"Can a manufacturer refuse to quote a price for any of his products to anyone?" a contractor asked.

"Yes, he can," Secrest replied. "He only violates the Robinson-Patman Act if he gives a price to one buyer that he does not give to all."

"Is there anything to prevent a manufacturer of seasonal goods from cutting the price of his goods during the off-season after his regular distributors have acquired

a large inventory at the higher price?" asked another of the contractors.

"No there isn't," Secrest answered, "provided he makes the same offer to all prospective purchasers. If a distributor buys more of a manufacturer's product than he can sell, that is a matter of his own judgment. The Federal Trade Commission can't do anything about that."

Asked about the legality of quantity discounts, Secrest pointed out that a seller can offer a discount only on the basis of cost savings and he must be prepared to show that the discount is based on his own cost savings. It is not too difficult for a manufacturer to show such cost savings, he noted, but a broker or distributor would have a hard time justifying any sizeable discount based on his own cost savings, because his costs would normally be small.

guage applicable to the particular industry."

Group 2 Rules

"Practices which are the subject of Group II rules are not in and of themselves violations of the law. In general they are expressions of the industry's views on the desirability or undesirability of practices and condemn those which the industry considers harmful or unethical and encourages practices which the industry considers beneficial to itself and to the public.

"These rules are regarded as voluntary rules, as distinguished from Group I rules which are mandatory, and the compliance of members rests solely on their willingness to abide by them. . . .

"It is our desire that rules promulgated for industries should constitute a vital force in maintaining observance in industry of fair and effective competition and we feel that our trade practice conference procedures are ideally suited to this aim, and effectuate its purpose.

"Briefly we will now consider the purpose, and procedures of a trade practice conference.

"1. *Purpose.* Under the trade practice conference plan problems are worked out and resolved cooperatively in contrast to the compulsory method of dealing with individual concerns in adversary proceedings before the commission.

"In a trade practice conference, the concern is solely with regard to trade practices or methods, and not with individual offenders. Through the proceedings industry obtains substantial guidance as to the lawfulness and unlawfulness of

their activities which is not available from the general language of the statutes.

"The proceedings are designed to bring out all facets of the problems facing the industry and to insure consideration of the industry views on the matter—an objective which is not always possible in litigation where the issues are confined to narrow limits.

Conferences Have Proven To Be Educational Force

"The trade practice conference procedure has performed for industries and the public a great educational service and its value in eliminating and preventing unethical practices and cutting the cost of law enforcement has been great indeed.

"It has proven to be the means of effecting a very substantial degree of self-discipline in industries. Implicit in the plan is recognition that the great majority of American businessmen are honest in the desire to keep their business practices and behavior in full consonance with high ethical standards and legal requirements.

"2. *Procedures.* (a) Trade practice conference proceedings for an industry are usually started upon application by a representative group in the industry.

"They are also instituted on the commission's own motion when it is apparent that practices which violate laws which the commission administers are prevalent in a particular industry, and it is probable that they could be eliminated through the conference procedure.

(Concluded on next page)



NEW CHEVROLET TRUCKS

engineered and designed
with your profit in mind!

Everything about these new Chevrolet trucks spells profit! Their low cost, their stamina and dependability, even their traditionally higher resale value!

COST LESS TO BEGIN WITH

That's right, Chevrolet brings you America's lowest-priced line of trucks—so you save right from the start. The beauty of it is, you go right on saving! With the high compression ratio of Chevrolet's three great engines, you register more miles on the job for each tankful of gas. You can count on fast starts; easy pulling up steep grades. You stay on schedule and keep the profits coming in on time!

COST LESS TO MAINTAIN

That's because of the rugged strength and stamina engineered into every new Chevrolet truck. They stay on the job longer (actual owner reports prove it!), cutting your maintenance costs right to the bone. Look over the many advance-design features in the next column and you'll begin to see why.

Your best bet is to talk trucks with your Chevrolet dealer. He'll tell you all you want to know about these Chevrolet profit-makers! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—positive-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **RIDE CONTROL SEAT***—eliminates back-rubbing. **LARGE UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give trip-saving load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance.

*Optional at extra cost. Ride Control Seat is available on all cabs of 1½- and 2-ton models, standard cabs only in other models. "Jobmaster 261" engine available on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.

When It Comes to Carbonators . . .
WHAT'S BEST FOR YOUR CUSTOMERS
IS DYNAMITE FOR YOUR SALES!

THAT'S THE
SUPERCHARGER CARBONATOR
BY CARBONIC DISPENSER

INCORPORATING THESE SUPERIOR FEATURES

1. Patented jet foamless method produces highest degree of carbonation possible—93% to 100%. U. S. Patent #2,588,677.
2. Minimum number of moving parts, plus "Pump Sentinel," Carbonic Dispenser's exclusive fool-proof pump protection device, is users' insurance against costly repair bills.
3. Midsize—16"x13½"x9½". Giant Capacity—100 gallons per hour.

THE PREFERRED CARBONATOR—FROM NEIGHBORHOOD TAVERNS TO THE NATION'S FAMOUS COCKTAIL LOUNGES, FROM DRUGSTORES TO MAJOR LEAGUE BALLPARKS.

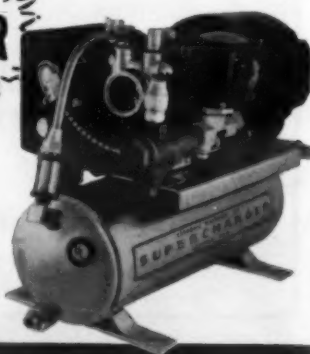
MAIL THIS COUPON TODAY

For literature outlining the opportunity now open to make bigger profits selling Carbonic Dispenser Equipment.

Name _____

Address _____

City _____ State _____



General Offices: Canfield, Ohio
Branch Offices:
1851 Randolph St., Los Angeles, Calif.

IN CANADA: GENERAL EQUIPMENT CORP., LTD., TORONTO, ONT.

Fair Trade Conference Procedure--

(Concluded from preceding page)

"(b) The conference is scheduled in a city located centrally with respect to members of the industry, all of whom are invited to attend.

"(c) An official of the commission, usually one of the commissioners, presides at the conference, and the problems of the industry are thoroughly thrashed out and a set of proposed rules is recommended to the commission for its consideration and action.

"(d) The commission then takes the recommendations of the industry under advisement and after study releases proposed rules and schedules a hearing thereon, to which not only members of the industry, but also consumers and other interested parties are invited and extended the opportunity of presenting their views.

Proposed Rules Cleared With Justice Dept.

"These proposed rules are always cleared with the Department of Justice to prevent any conflict with Department of Justice rules for the industry under the Sherman Anti-Trust Act. It would not do for the Federal Trade Commission to give an industry member the impression that it is all right to do something when he could be tripped up by the Department of Justice for doing it.

"(e) After this public hearing, and after careful consideration has been given to all views and available information, the commission approves and issues the rules, sending each member of the industry a copy with an acceptance form, which the industry member may sign if he so desires.

"If the industry member does not care to subscribe to the rules, he is perfectly free to refuse to do so. Failure to sign in no way excuses him from full compliance with each and every applicable law administered by the commission.

"In no case can trade practice rules be used as a vehicle to violate the laws of Congress as interpreted by the commission or the

courts. They are not designed to perfume a skunk, but rather to strengthen and preserve all that is good in the economy.

"The many who have been good always, and the few who truly, and in time, repent of wrong doing, are welcome under the roof of trade practice rules.

Violator May Be Reached In or Out of Group

"He who persists in evil practices still may be reached by the law, either under the roof or out in the cold. In fact, trade practice rules may furnish the necessary light for the law-abiding members of an industry to detect and eliminate the vermin from an otherwise inviting and restful economic house.

"The trade practice conference procedure affords the industry an opportunity to clean house and is predicated on the premise that the overwhelming majority of businessmen are unwilling to stoop to unfair tactics even though at times some may feel that they must do so in order to meet unfair or unethical competition.

"Many would like to abandon the use of these unfair methods if they can be assured that their competitors would do likewise. The procedure provides a way for abandonment of wrong-doing on a given date without competitive injury to any members of the industry. It affords the industry an opportunity to make a fresh start on a fair competitive basis.

"In conclusion, may I say that trade practice rules are never final. New rules may be added to meet new situations, old rules can be changed or deleted entirely to meet future conditions or requirements. "They serve as a road map and when a better section of highway is completed, it would be foolish not to use it. . . .

"Hunting down each individual violator is expensive and time consuming and doesn't do the job. We think that the adoption of trade practice rules is a better way."

Punxsutawney Names Bill To Southeast Region

PUNXSUTAWNEY, Pa. — Appointment of Walter R. Bill as sales representative in the south-east territory has been announced by the Punxsutawney Co. here.



Walter R. Bill

Bill will handle sales of Beverage-Air equipment in Alabama, Georgia, South Carolina, and Florida. He will make his headquarters at

Pass-A-Grille, Fla.

He was formerly part owner of B & W Seating Co. and is vice president of the Western Pennsylvania Chapter of the Pennsylvania Food Service Equipment & Supply Co.

Schaefer To Distribute Cabinets from 11 New Branches, Warehouses

MINNEAPOLIS — Eleven new branch and warehouse locations for ice cream cabinet distribution have been established by Schaefer, Inc., according to Elton F. Hess, sales manager.

All will carry a complete stock of Schaefer standard, glass front, "Clearview" glass top, and automatic defrost ice cream cabinets at all times, he said.

Bessire & Co., Inc., Schaefer distributor in Memphis, Tenn., will now stock and distribute cabinets in Columbus, Ohio; Indianapolis; and Richmond, Va. Dudley Cawthon, Inc., Schaefer distributor in Miami, Fla., has established branches in Jacksonville and Tampa.

Electric Utilities Corp., Schaefer distributor in Kansas City, Mo. and Tulsa, Okla., has opened a branch in Oklahoma City. Lockheed Distributing Co., St. Louis, has opened a new branch with warehouse stocks in Louisville, Ky., and Paper-Pak, Inc., Schaefer distributor in Buffalo, has opened a distributing branch in Rensselaer, N. Y.

Stahle Distributing Co., Inc., with headquarters in Dallas, has established warehouses in Albuquerque, N. M.; Fort Worth, Texas, and New Orleans. Additional branches and new distributors will be announced in the future.

Toronto Firm To Handle Victor, Curtis Equipment

TORONTO, Ont., Can. — D. D. Matthews, president of Refrigeration Servicentre Limited, Toronto, has announced the appointment of his company as exclusive Ontario distributor for Victor Products Corp. of Hagerstown, Md.

The agreement covers such products as commercial fixtures of all types and home freezers. An adequate sales staff has already been arranged to cover the commercial sales field, it was stated.

At the same time, Matthews also announced the appointment of his company as distributor for Curtis Refrigerating Machine Co. of St. Louis.

Breitling Will Represent 4-Bros. In 12-State Area

PHILADELPHIA — 4-Brothers Refrigeration Mfg. Co. announced recently that M. Frantz Breitling has been appointed exclusive representative in California, Arizona, Texas, Oregon, New Mexico, Idaho, Nevada, Washington, Utah, Wyoming, Oklahoma, and Colorado.

Breitling was formerly national sales manager of Ajax Corp. of America and is now president of the Ajax West Coast Corp.

Visitors Get Low-Down on Modern Ice Production



EFFICIENT ice production is the topic under discussion between Bill Lapin (left), western district sales manager of the Scotsman ice machine line, and John Savage, president of the Pig n' Whistle restaurant chain of California. Occasion was the Golden Gate Restaurant Association convention held recently in San Francisco. Lapin is pointing up details of a Scotsman Super Ice Flaker, part of a complete line by American Gas Machine Co., Albert Lea, Minn.

Ray J. Slezak Appointed Delavan Sales Engineer

WEST DES MOINES, Iowa — Appointment of Ray J. Slezak to fill the newly-created position of sales engineer has been announced by Delavan Mfg. Co. here.

Company officials said Slezak's appointment is another step in

Delavan's program in providing sales engineering service to customers in the industrial, aviation, heating, and agricultural fields.

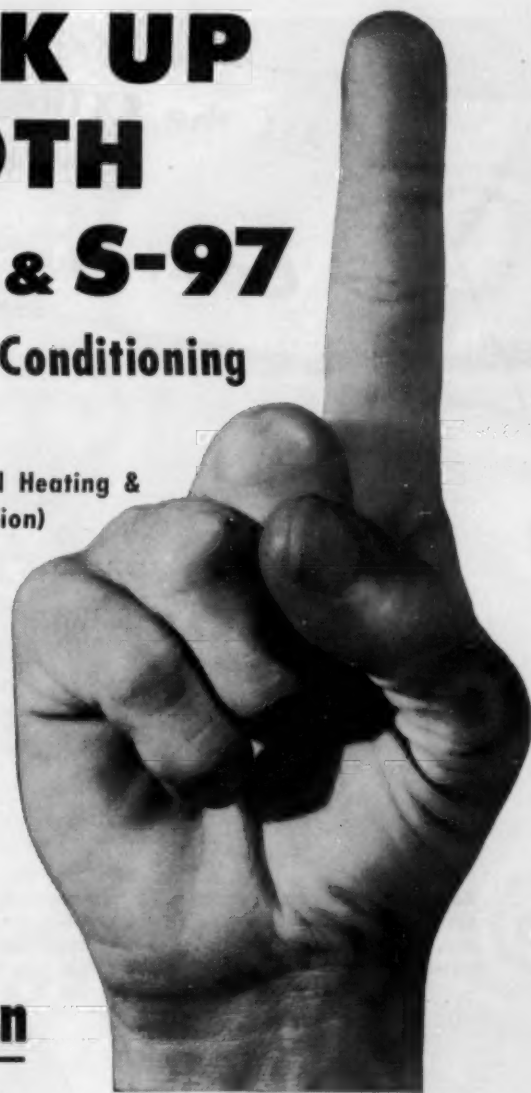
Slezak will travel the United States to expedite Delavan service and promote the sale of Delavan nozzles. Before joining the West Des Moines firm, he was a development engineer in the aircraft division of Thompson Products, Inc.

LOOK UP BOOTH S-95 & S-97

At the Air Conditioning Exposition

(12th International Heating & Ventilating Exposition)

Philadelphia
Jan. 24 to 28



and learn
all about

genetron
Super-Dry Refrigerants



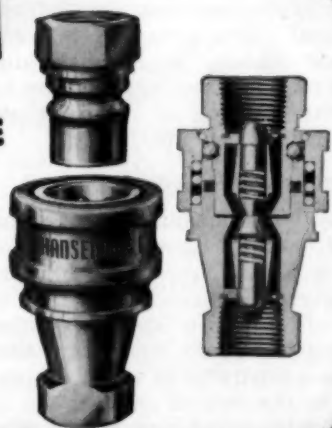
GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

PRODUCERS OF

genetron REFRIGERANTS

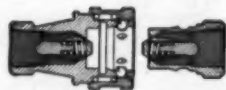
HANSEN

**QUICK-CONNECTIVE
2-WAY
SHUT-OFF
COUPLINGS!**



QUICK CONNECTION
AND
DISCONNECTION

INSTANT
AUTOMATIC FLOW
OR SHUT-OFF



Seals Both Ends of Line
AUTOMATICALLY
INSTANTANEOUSLY

To connect a Hansen Two-Way Shut-Off Coupling, you just pull back the sleeve and push the Plug into the Socket. To disconnect, merely pull back sleeve. No tools required. Similar valves in Socket and Plug shut off both ends of line when Coupling is disconnected—practically eliminate spilling of liquid or escape of gas at instant of disconnection.

FEMALE PIPE THREAD CONNECTIONS FROM 1/8" TO 1"

Hansen Series HK Two-Way Shut-Off Couplings are available with female pipe thread connections from 1/8" to 1" inclusive. Available in brass or steel.

Also Straight-Through and One-Way Shut-Off Couplings. Write for Catalog.

REPRESENTATIVES IN PRINCIPAL CITIES

Quick Connective
Fluid Line Couplings for
AIR - OIL - GREASE - HYDRAULIC
FLUIDS - REFRIGERANTS - STEAM
VACUUM - OXYGEN - ACETYLENE
GASOLINE - COOLANTS - WATER

HOSE CLAMPS - HOSE CLAMP
PLUGS - HOSE CLAMP SOCKETS
HOSE CLAMP COUPLINGS - AIR
LIQUID SPRAY GUNS - AIR BLOW
GUNS - SAND BLAST CLEANERS
ENGINE CLEANERS

SINCE 1915



QUICK-CONNECTIVE FLUID LINE COUPLINGS

THE HANSEN MANUFACTURING COMPANY

4031 WEST 150th STREET • CLEVELAND 11, OHIO

How To Balance Refrigeration System By Selecting Proper Flow Control Device—1

By John A. Schenk, Director of Engineering, Alco Valve Co.

Heat balance in the refrigeration system exists when the heat flow to the evaporator equals the net capacity of the compressor to pump this same amount of heat to the condenser where it is rejected together with the heat of compression.

The refrigerant flowing in the system acts as the vehicle to carry the heat from the evaporator through the compressor to the condenser. By increasing or decreasing the refrigerant flow rate, the capacity of the refrigeration system can be increased or decreased.

"Balancing the Refrigeration System" may be defined as the regulation of one or more of the system's components to establish equilibrium between heat flow to the evaporator and the heat rejection from the condenser, after the latter figure is corrected by deducting for the heat of compression. This balance or equilibrium may be accomplished in many ways by effecting a change in one or more of the following:

1. Compressor capacity.
2. Rate of refrigerant flow.
3. Rate of heat absorption by the evaporator.

4. Rate of heat rejection by the condenser.

Controls and refrigerant flow control valves play an important part in balancing the refrigeration system. Therefore, the selection of the proper refrigerant flow control valves and the correct application of these devices is vitally important in guaranteeing satisfactory performance of the refrigeration system.

Let us first consider the compressor and the various ways in which it may be arranged in the system. Compare in each case the ability of the compressor capacity to balance with the load or the desired rate of heat flow to the evaporator.

1. One compressor without means of capacity reduction other than the on-off method of operation. (In this case when the compressor operation is continuous, the only reduction in capacity available is that which results from a reduction in suction pressure).

2. One compressor with by-pass from discharge to suction. (Approximately 50% capacity reduction possible).

3. One compressor with two-speed motor control. (Approximately 50% capacity reduction possible).

4. Two or more compressors, not including methods two and three. (System compressor capacity can be reduced in direct proportion to the number of compressors used).

5. One or more compressors with cylinder unloading. (Most flexible system compressor capacity of all the methods mentioned above).

Method No. 1 offers very little flexibility in compressor capacity and therefore in such a system most of the burden of balancing the system capacity to the load must be borne by the controls and the refrigerant flow control valves. Methods 2 and 3 permit the com-

pressor capacity to balance more closely with the load. Methods 3 and 4 offer the best arrangement of balancing the compressor capacity to the load.

Valve Selection Based on What Is Expected of System

It can readily be seen that the choice of refrigerant flow control valves for each different system should be carefully considered and selections made only after the engineer fully understands what is expected of the system. Application of these control valves is also of great importance and the success or failure of these valves to balance the system depends largely on their being applied correctly.

Now let us consider the operation of the various types of control valves and how they may be used to best advantage in achieving system balance.

In general the constant pressure expansion valve, when applied as a liquid refrigerant expansion valve, is suitable only on constant load applications and therefore its use is limited.

When used on a variable load application, this valve will starve the evaporator at high load and overfeed the evaporator at low load. However, there are other applications of this valve that are of interest.

It may be used as a pilot valve for large suction pressure regulators or as a hot gas by-pass valve in the refrigeration system. The latter application may result from the need for a reduction in compressor capacity or for maintaining a minimum suction pressure to prevent blocking of a forced air evaporator with frost or ice.

Thermostatic Expansion

The thermostatic expansion valve is the most versatile, popular, and economic type of liquid refrigerant expansion valve. It is a precision device which regulates the rate of liquid refrigerant flow to the evaporator in exact proportion to the rate of evaporation of the liquid refrigerant in the evaporator. It is operated by:

1. The evaporator pressure.
2. The remote bulb pressure, created by the superheat of the refrigerant gas leaving the evaporator.
3. The superheat spring.

Liquid and liquid cross-charged thermostatic expansion valves may be installed in any position or location regardless of whether the valve body temperature is warmer or colder than the temperature of the remote bulb. See Fig. 1. The liquid charge, consisting of the same refrigerant as is used in the system, provides essentially a constant superheat over a considerable range of evaporator temperatures.

The liquid cross charge is designed for greater power to deliver rated valve capacity at operating conditions and to minimize "hunting" throughout its range. See Fig. 2. This charge is primarily designed for low temperature application.

The inherent high superheat characteristic during pull-down prevents "flood back" on start-up and motor overload. This high superheat is reduced to a practical

operating value as the evaporator temperature is lowered to the desired operating range. Valves with this type of charge should be set for optimum superheat at the lowest evaporator temperature expected in order to avoid "flood back."

A gas-charged thermostatic expansion valve can provide compressor motor overload protection on some systems because of its limiting effect on the maximum operating suction pressure. It also prevents "flood back" on start-up.

Increasing the superheat setting will lower the maximum operating pressure (MOP), and decreasing the superheat setting will increase the maximum operating pressure (MOP) because the superheat spring, together with the evaporator pressure, acts directly on the remote bulb pressure through the power element diaphragm.

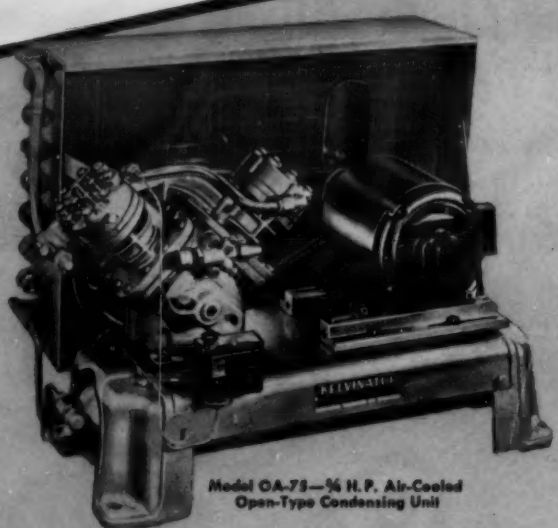
Since a gas-charged thermostatic expansion valve contains liquid in the remote bulb up to the MOP point, it is important that this liquid remain in the remote bulb as shown in Fig. 3.

Location of Valve

The valve must be placed in a location that will allow the power head and remote bulb tubing to be warmer than the remote bulb. This will prevent condensation of the charge in the power head or remote bulb tubing which would otherwise make the valve inoperative.

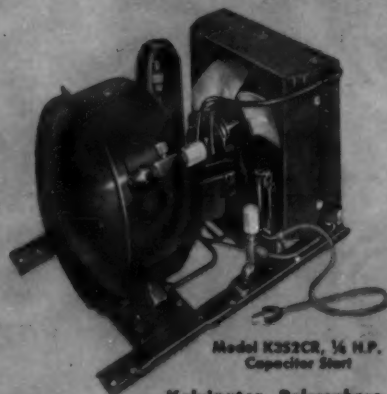
Gas-charged thermostatic expansion valve (Continued on next page)

Get ALL the EXTRAS at NO EXTRA COST
Get Kelvinator
Open-Type Condensing Units



Model CA-75—1/2 H.P. Air-Cooled Open-Type Condensing Unit

Kelvinator offers a precision built line of open-type units famous for dependable performance and trouble-free service, yet they are priced realistically, let you meet any competition. A complete line of air-cooled, water-cooled, combination air- and water-cooled, and truck type from 1/4 H.P. air-cooled through 5 H.P. water-cooled.



Model K352CR, 1/2 H.P. Capacitor Start

Kelvinator PolarSphere Internally Mounted, Hermetically Sealed, Condensing Units. A complete line from 1/5 H.P. through 1/2 H.P. for a wide range of applications.



Packaged For Profit! Kelvinator Sealed Compressors. Complete packaged compressors for household and commercial cabinet replacement now available from Kelvinator, for the first time. (Model DK 352C 1/2 H.P. capacitor start, illustrated.) High capacity, competitively priced compressors. 10 models. 1/4 H.P. through 1/2 H.P.

EXTRA LARGE!
Air-Cooled
Condensers

EXTRA LARGE!
Receivers

EXTRA CAPACITY!
Water-Cooled
Condensers

EXTRA!
Heavy-Duty
Construction

EXTRA!
Easy-to-Service

NO EXTRA INVENTORY
COSTS! \$25. will cover your
parts investment for all
models in seals, valve plates,
gaskets, etc.

SEE YOUR REFRIGERATION WHOLESALE OR
MAIL THIS COUPON

Commercial Dept., Kelvinator Division
American Motors Corporation, Dept. AC-18
14230 Plymouth Road, Detroit 32, Michigan

I am interested in more information about

☐ Open-type condensing units.
☐ Sealed Compressors. ☐ Sealed-type condensing units.

Name..... Title.....

Company.....

Street Address.....

City..... Zone..... State.....

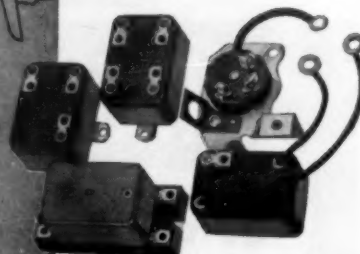
When your business depends on cold you can depend on

Kelvinator

Specialists in Refrigeration Since 1914

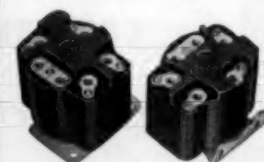
A COMPLETE LINE—
Designed to Your
Requirements

R-B-M
MOTOR STARTING RELAYS
AND OVERLOAD PROTECTORS



SERIES RELAYS

Balanced armature—Can be mounted in any position.



POTENTIAL RELAYS

Precision snap-action contacts. Convenient terminal board wiring. Totally enclosed.



OVERLOAD PROTECTORS

Patented bi-metal snap-action—Inherent protection. Large solder terminals. Manual and automatic.

Let R-B-M engineering and production facilities serve you. Phone 5121 or Write Dept. M-1.

R-B-M DIVISION
ESSEX WIRE CORPORATION
Legansport, Indiana



Controls for Electronic, Refrigeration, Industrial, Appliance, Communication and Automotive Industries.

Service & Supplies

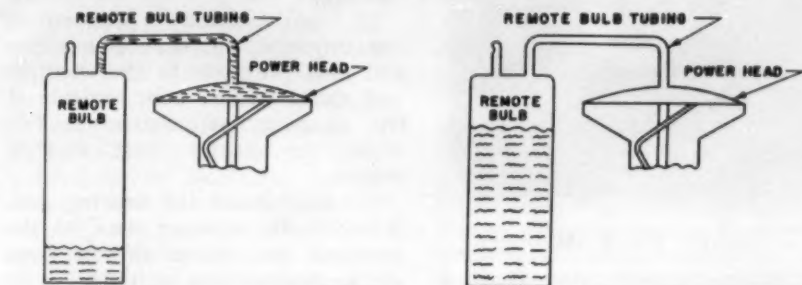


FIG. 1—Volume of liquid charge in a liquid-charged thermostatic expansion valve exceeds combined volume of power head and remote bulb tubing. Thus, there is always some liquid in the remote bulb.

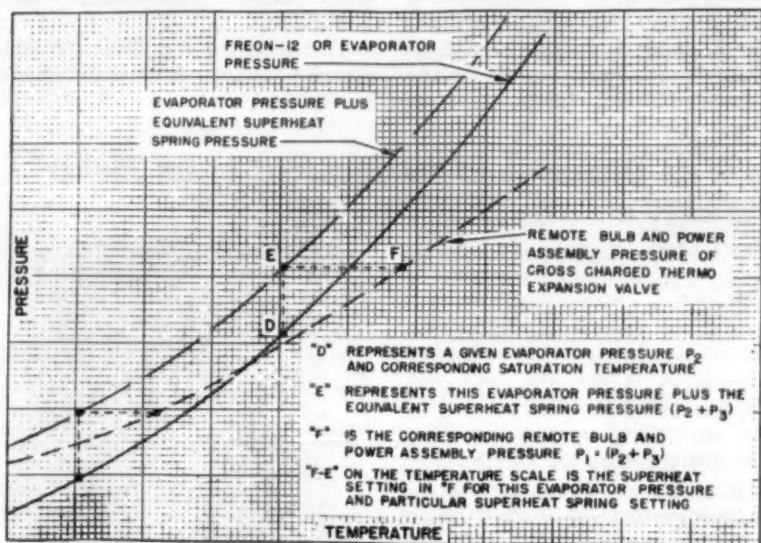


FIG. 2 shows temperature-pressure relationship with cross-charged valve.

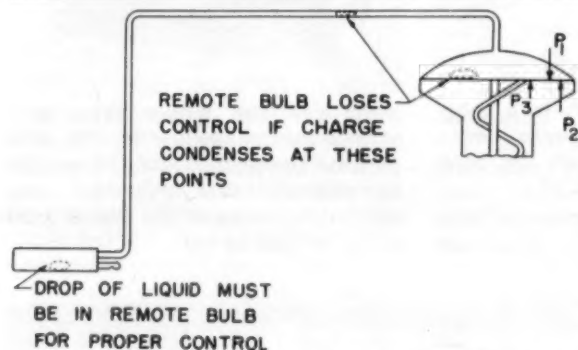


FIG. 3—Gas-charged expansion valves perform best in evaporator range between 30° and 50° F.

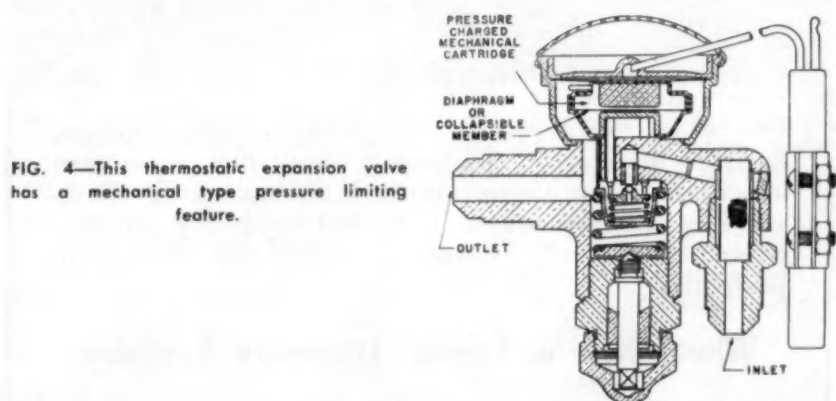
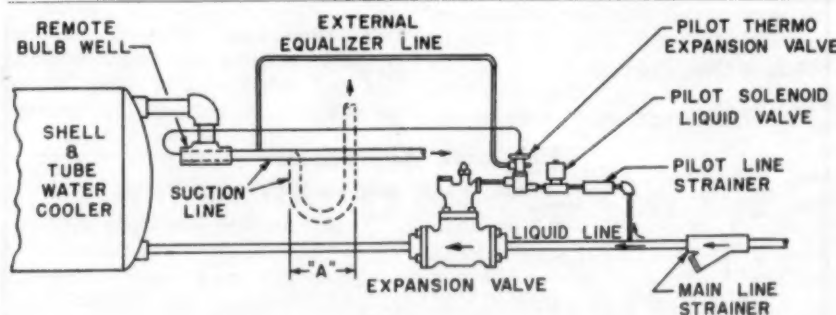


FIG. 4—This thermostatic expansion valve has a mechanical type pressure limiting feature.



NOTE: WHEN SUCTION LINE RISES DIMENSION "A" SHOULD BE AS SHORT AS POSSIBLE

FIG. 5 shows a pilot-operated thermostatic expansion valve in a shell-and-tube water cooler system.

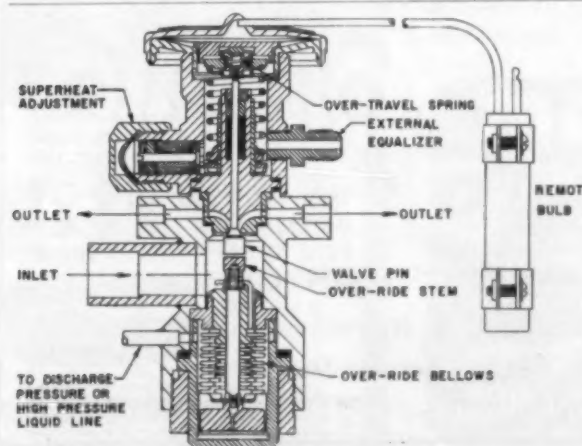


FIG. 6 is a multi-outlet expansion valve with integral discharge pressure over-ride modulating feature.

Balancing System--

(Continued from preceding page) pansion valves, while not limited in their application, perform to best advantage on water chillers and air conditioning units with evaporator temperature range between 30° and 50° F.

Thermostatic expansion valve charges should be selected in accordance with the valve manufacturer's recommendations for best performance.

Thermostatic expansion valves with the mechanical pressure limiting feature use a liquid or liquid cross-charged remote bulb. Typical valve construction is shown in Fig. 4.

Advantages of Mechanical Pressure Limiting Valve

The main advantage of the mechanical pressure limiting type valve is that installation in any position or location is permitted since the remote bulb is liquid or liquid cross charged and will not lose control as is possible with the gas-charged type.

The MOP of the thermostatic expansion valve, illustrated in Fig. 4, remains unchanged, when an adjustment is made in the superheat setting, because the pressure cartridge in this construction is unaffected by the superheat spring pressure.

Large capacity thermostatic expansion valves are usually built on

the pilot-operated principle. It is customary to use a small thermostatic expansion valve to pilot a large piston-type, spring loaded expansion regulator. The small thermostatic expansion valve supplies pressure to or bleeds pressure from one side of the regulator piston containing a small bleed hole. The unbalanced force thus created is used to position the regulator valve and modulate the liquid refrigerant flow to the evaporator.

Fig. 5 shows such a control valve application on a shell-and-tube water cooler with refrigerant flowing inside of the tubes (direct expansion cooler). In the example shown, pressure is supplied by the pilot thermostatic expansion valve to the top of the regulator piston, moving the regulator valve in an opening direction.

By installing a pilot solenoid liquid valve ahead of the pilot thermostatic expansion valve, the regulator also serves as a liquid stop valve, when the pilot solenoid liquid valve is closed.

Fig. 6 shows a multi-outlet thermostatic expansion valve with integral discharge pressure over-ride modulating feature. When the compressor discharge pressure is below the predetermined control point the charge pressure between the two bellows acts to pull the over-ride stem away from the valve pin, and the thermostatic expansion valve functions normally.

As the compressor discharge

pressure rises and approaches the control point, it overcomes the bellows pressure and pushes the valve pin in a closing direction by action through the over-ride stem.

The refrigerant flow through the thermostatic expansion valve can be modulated, between maximum capacity and zero, by action of the over-ride unit, in response to discharge pressure, to prevent compressor motor overload as the result of high discharge pressure.

For the best evaporator performance, the thermostatic expansion valve should be applied as close to the evaporator as possible and in such a location as to make it easily accessible for adjusting and servicing.

When the pressure drop or centrifugal type refrigerant distributor is used to feed the evaporator, apply the thermostatic expansion valve as close to the distributor as possible. Don't use an elbow fitting between the valve and distributor.

When the manifold type refrigerant distribution header is used, where velocity is not desired, install a baffle in the header, which will minimize the tendency to over-feed the evaporator circuits directly opposite the header inlet connection or feed the header at 90° from the evaporator tube connections. An elbow fitting installed between the thermostatic expansion valve and the header inlet is also helpful to minimize this velocity effect.

(To Be Continued)

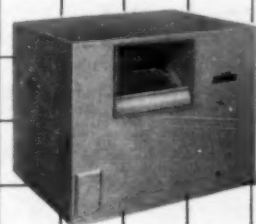
SKYROCKET SALES WITH

usAIRco

Kooler-aire system
of "waterless" air conditioning

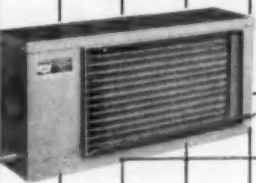
CONDENSING UNIT

compressor
condenser coil
blower
receiver



COOLING COIL

coil
expansion valve
drain pan

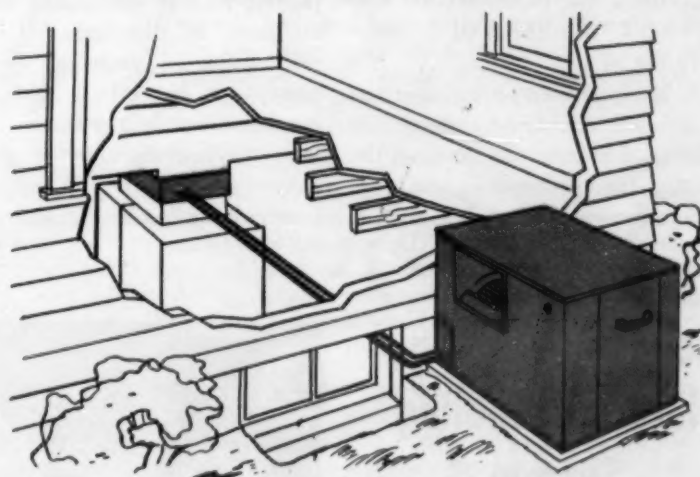


COIL-BLOWER

filter
coil
expansion valve
drain pan
blower



a new weapon to help you
capture an increasing share
of the residential market!



Now you can meet today's growing demand for waterless air conditioning with the finest system made... the usAIRco Kooler-aire. Kooler-aire operates on electricity only, the ideal air conditioning system where water is scarce or expensive, and where water disposal is a problem. The unit is usually located out-of-doors, but may be installed indoors when vented. Cabinet is weatherproof. Copper tubing carries the refrigerant from the condensing unit to the Kooler-aire housed cooling coil, which may be installed anywhere on the outlet side of the air supply system. The cooled air is distributed through existing furnace ductwork. Where furnace blowers do not deliver sufficient air volume, usAIRco provides a housed coil-blower unit with optional filter section.

See our exhibit at

INTERNATIONAL HEATING
& VENTILATING EXPOSITION

Philadelphia

January 24-28, 1955

BOOTHS 58-59

UNITED STATES
AIR CONDITIONING
CORPORATION



MINNEAPOLIS 14, MINNESOTA

Export: 13 E. 40th St., New York 18, N.Y., U.S.A.

What's New

When requesting further information on new products, please use "Information Center" form.

Ace Frozen Food Cabinet Features Automatic Defrost



KEY NO. E-1322

NEW BEDFORD, Mass.—A new line of automatic defrosting ice cream and frozen food merchandising cabinets has been announced by Ace Cabinet Corp. here.

The new cabinets are said to have greater vision than previous open models and larger front opening for greater accessibility. Cabinets are now being produced in 5 and 7-ft. lengths, each with a width of 32½ in. and a height of 56 in.

Feature of the new line is the color combination of white and a brilliant gold trim in keeping with the recently announced Ace "golden line" for 1955.

Interior liner is constructed of galvanized steel and deluxe white baked enamel coated. Superstructure is fluorescent lighted.

Heater Specially Designed For Plants, Warehouses

KEY NO. E-1323

RACINE, Wis.—A "Power-Throw" unit heater designed to provide a powerful horizontal discharge of heated air at outlet velocities said to be considerably greater than those of conventional horizontal models has been announced by the Modine Mfg. Co.



The heater is particularly adaptable for use in large plants and warehouses.

The unit also can be used to blanket large, frequently opened doors with a curtain of heated air.

Models are available in capacities of from 271,200 to 609,600 B.t.u./hr.

Pipe Surface Thermometer Clips Into Position

KEY NO. E-1324

LOS ANGELES—Pacific Transducer Corp. has announced its new pipe surface thermometer to be used to obtain temperature of pipes and tubes from ½ in. to 2 in. in size.



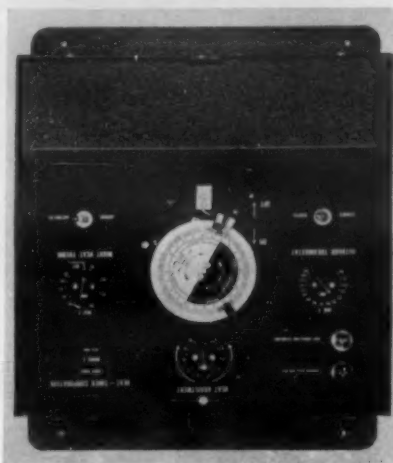
The thermometer is fastened to the pipe by means of a spring clip without the use of tools. A spring is pushed over the pipe by hand and snaps the thermometer into place.

Temperature sensitive element is a calibrated bimetal and is closely coupled thermo-dynamically to the pipe.

Accuracy is plus or minus 2° over the entire range of the thermometer, which reaches stability within five minutes. It is not necessary to open any pipe joints to install the thermometer. The bimetal element is protected by a copper cup which is made to fit the pipe closely.

Pipe surface thermometer comes in two ranges, one from -50° F. to 250° F., and the other from 70° F. to 370° F. The thermometer dial is 2 in. in diameter. Price of the unit is \$6.75 each f.o.b. Los Angeles.

'Heat-Timer' Bases Regulation on Outside Temp.



KEY NO. E-1325

CHICAGO—Enterprise Heat & Power Co. here has announced the introduction in the midwest area of the "Heat-Timer" system of heat regulation.

The announcement, by Henry A. Naft, president of the company, that Enterprise would serve as the exclusive midwest factory branch

for Heat-Timer was made after one and one half years of testing the system in the Chicago area, it was stated.

Heat-Timer is said to automatically regulate the heat furnished to a building based on outdoor temperature and on the actual heat requirements of the individual building.

"It automatically proportions the required number of minutes and heat per hour to the weather and shuts off the heat entirely if the outdoor temperature is too warm for heat," Naft further stated.

"It also starts the heating program at the desired time in the morning and shuts off the heat at the desired time at night."

"It simply times heat to weather," he added, "and the entire control system consists of three separate units electrically interconnected."

He referred to the "Weather Head," "Indoor Element," and the control panel.

Wide Discharge Chute Featured In Ice Maker

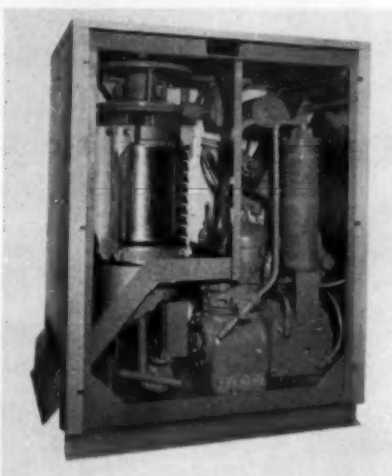
KEY NO. E-1326

OAKLAND, Calif.—Being offered by Liquid Freeze Corp. here, manufacturer of "Instant-Ice" machines, is its new model SC15-WC, a self-contained unit that reportedly produces 1,500 lbs. of cold, hard, and dry ice flakes per 24 hours of operation with entering water temperature of 75° F.

This medium size capacity model was "designed to save floor space and for convenience of installation on storage bins, walk-in boxes, etc.," according to J. H. Lessard, sales manager. Floor space of the machine was given as 26 in. deep, 38 in. wide, and 48 in. high.

The condensing unit is a 2-hp. water-cooled "Copelametic" with ample condenser for use on cooling towers, it was stated.

"A principal feature of this model is the wide ice discharge



chute (18½ in. wide). From 50% of the circumference of the evaporator the ice flakes fall free into the wide ice chute. This does away with all chances of ice flakes jamming or balling up.

Mitchell expands line of Air Conditioners... Offers Air and Water Cooled Self-Contained units from 2 to 7½ tons

CHICAGO, ILL.—Today, 19 new Self-Contained package Air Conditioners were announced by B. A. Mitchell, president, Mitchell Mfg. Co.

Heralded as a milestone in modern air conditioning engineering, the new Mitchell line includes Store Coolers in 2, 3, 5, and 7½ ton capacities both air and water cooled. Residential Add-On units in 2, 3, and 5 ton capacities, air and water cooled. Year 'Round Residential Air Conditioners in 1½, 2, and 3 ton capacities air and water cooled with gas fired furnaces from 75,000 to 150,000 b.t.u.

B. A. Mitchell pointed out that the new Mitchell Air Conditioning line was designed to meet the needs of the contractor, the service man and consumer, with such outstanding advantages as a Performance Guaranteed hermetic cooling system, new Slide-A-Way chassis and the amazing Electromagic Filter Eye.

"You expect more from Mitchell and you get all these amazing original air conditioning advantages. Mitchell discarded old fashioned air conditioning ideas and designs to give you more to sell."

"From the very introduction of room air conditioning, we have played a leading part in developing significant advances in this industry. Mitchell self-contained package air conditioners are being built with the best economies of modern mass production, giving the American public maximum quality and value in air conditioning," said Mitchell.

Recognizing this problem, Mitchell engineers developed the Electromagic Filter Eye that constantly measures an air conditioner's filtering efficiency and signals the user automatically when it is time to change filters for most efficient, most economical operation.



Mitchell has exclusive selling advantages

CHICAGO, ILLINOIS—An exclusive filter gauge, called the Electromagic Filter Eye, was announced today as standard equipment on all store units. This revolutionary air conditioning advance operates a positive signal light which tells the user when it is time to change filters.

As a deposit of dirt builds up in ordinary air conditioners, filters become clogged, capacity drops off, power and water costs increase—while cooling power decreases.

Recognizing this problem, Mitchell engineers developed the Electromagic Filter Eye that constantly measures an air conditioner's filtering efficiency and signals the user automatically when it is time to change filters for most efficient, most economical operation.

Mitchell merchandising program ready

A complete and detailed sales program is yours to build qualified prospects and close sales. Write today on your business letterhead for complete details on the Mitchell Packaged Air Conditioning Franchise.

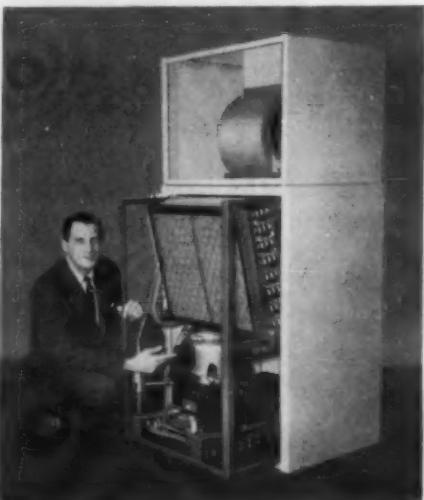
SEE THE ALL NEW MITCHELL AT BOOTH NO. 631 HEAT. & VENT. EXPOSITION, PHILA. JAN. 24-28

New Slide-a-Way Hermetic Cooling System

R. H. Lodge, Mitchell Sales Manager, demonstrates Slide-A-Way Chassis in 3 H.P. Residential Air Conditioner.

"This Slide-A-Way Chassis means that it will cost less to install and service a Mitchell," said Lodge at the premier showing of this new Residential line. He pointed out that it was not necessary to remove electric controls, damper linkage, baffles or sheet metal parts to slide out the chassis for service or inspection.

Performance guaranteed to provide comfort cooling in the space to be air conditioned, Mitchell self-contained units are hermetic systems, high in capacity and very quiet. Incorporating the latest welded hermetic design, the Mitchell refrigerant system is sealed



like a radio vacuum tube with nothing to adjust or oil. There is no need for seasonal pumpdowns, no belts to wear out or adjust, and Mitchell is always ready to operate. The heavy duty Mitchell compressor is super quiet and provides dependable service. There are no manhole openings or gaskets to cause leaks.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No. Key No.
Key No. Key No.
Key No. Key No.
Key No. Key No.

Products Advertised
(list name, page, and issue date)

(PLEASE PRINT PLAINLY)

Name Title
Company
Street
City Zone State
Type of Business

MAIL THIS FORM TO
AIR CONDITIONING & REFRIGERATION NEWS
Readers Service Dept.
450 W. FORT ST. DETROIT 26, MICHIGAN

Square D Realigns Executives, Expands Advertising, Sales Promotion Plans

DETROIT—The sales division of Square D Co. has reorganized its sales, advertising, and promotion departments and realigned the functions of key executives, it was announced recently by Frank H. Roby, vice president.

Simultaneously, Roby revealed that Square D is launching the most extensive advertising and sales promotion campaign in the company's 51-year history.

Mitchell P. Kartalia, manager of merchandise sales, has been appointed manager of distribution equipment sales and will now devote full time to Square D's expanding markets in this field.

Kartalia joined Square D in 1940 as an application engineer in the company's industrial control division. More recently he has divided his time between internal sales responsibilities and the company's wholesale distributor organization, according to the announcement.

William H. Younger, manager of advertising, has been named manager of merchandise sales and advertising for both industrial control and distribution equipment. He will also function as chairman of the Distributor Policy Committee, a key group formed recently

to integrate merchandising policies of the company's various operating units.

In his new position, Younger, who joined Square D in 1947 in a field sales engineering capacity, will coordinate the expanded merchandising, advertising, and sales promotion activities.

Edwin N. Cobb, operating manager of Square D's field sales office in Birmingham, Ala. since 1948, has been appointed equipment specialist and will assist Kartalia in liaison with distribution equipment markets, and handle special assignments in selected sales areas.

Also reporting to Kartalia will be Robert E. King, who will continue to supervise the Detroit Headquarters Sales Dept. King joined Square D in the Cincinnati field sales office in 1948 and assumed his present duties last year.

Roby stated that Square D is developing new products and has plans to enter new markets as part of the company's current over-all expansion program. Products now range from small, mass-produced pressure switches and circuit breakers to tailor-made switchboards and control panels weighing many tons.

For Design, Application

S. W. Brown, Carrier Chief Engineer, Opens Own Consulting Firm

NEW YORK CITY — S. W. Brown, former chief engineer of the marine department of Carrier Corp., has opened his own business as a consulting engineer with offices in the Chrysler building here. The firm will specialize in the design and application of air conditioning and refrigeration systems.

Brown resigned from Carrier Jan. 1. He joined that organization's research and development department in 1937 and was named chief engineer of the marine department in 1943.

In the latter capacity he was associated with the engineering and design of refrigerating or air conditioning systems on more than 10,000 ships.

A pioneer in the development of high velocity air duct design as embodied in the air conditioning system on the *S. S. Lurline*, he holds a joint patent for a method of draftless shipboard air distribution employing perforated ceilings.

He also participated in the design of the air conditioning systems for the nuclear-powered submarines, *Nautilus* and *Sea Wolf*, and developed the completely automatic heat pump cycle for the cooling and heating of the Navy's new fleet type submarines.

WHY WAIT?

Get your new product info pronto. Use coupon on "What's New" page this issue.



"My Typhoon District Manager is always Johnny-on-the-spot," says Don Kissell (left), Typhoon Los Angeles dealer.

TO GET ON THE MOST PROFITABLE FACTORY-DEALER TEAM IN THE BUSINESS, TIE UP WITH

TYPHOON 505 Carroll St., Brooklyn 15, N. Y.
AIR CONDITIONING

• COMMERCIAL AIR CONDITIONERS, 2 TO 35 TONS
• RESIDENTIAL YEAR-ROUND UNITS FOR GAS OR OIL
• ROOM AIR CONDITIONERS, 1/2, 1, 1 1/2, 2 T.P.
• PACKAGED HEAT PUMPS, RESIDENTIAL & COMMERCIAL

G-E Revises Marketing Discount Structure on Polyphase Motors

SCHENECTADY, N. Y. — The General Electric Co. has announced a major revision of its marketing discount structure on polyphase induction motors in the 1 to 200-hp. range.

Effective Jan. 3, 1955, purchaser discounts have been revised to lower net prices an average of approximately 6%, the company said, resulting in a more realistic relationship between the various channels of distribution.

One phase of this realignment, the company further explained, will extend distributor coverage of standard motor lines in the 1 to 200-hp. range.

The announcement was made jointly by Thorne L. Mayes and O. F. Veal, general managers of G-E's Small Integral Motor Dept. and Medium Induction Motor Dept. respectively.

They explained that the new discount structure, and the resulting lower net prices, are the result of savings realized through modernized manufacturing and production facilities.

As an example of the change, basic user discounts on the 7 1/2 to 200-hp. motors have been increased to 49% from the former range of 40 to 45%, while quantity discounts have been increased up to 55% from the former 48%, they said.

In conjunction with the discount changes, they also announced two changes in book prices. Book prices for the 10 most popular rating of 4-pole "Tri-Clad 55" induction motors in the 1 to 5-hp. range have been reduced by 5%, while book prices for motors in the 40 to 200-hp. range have been adjusted upward by 5%.

In both cases, the result is a decrease in net price, the company pointed out.

Symposium Explores Question: Does ASRE Need Research Program? If So, What Kind?

PHILADELPHIA — Does the American Society of Refrigerating Engineers need a "real research program"; if so, should it be separate or in collaboration with related societies?

What theoretical and practical projects should be sponsored; and what should be the approximate duration and cost of such projects?

Where should such research projects be conducted and how should they be administered?

These and other questions received an airing at a special symposium, which was essentially an open committee meeting, held during ASRE's 50th annual meeting here.

The symposium made no attempt to arrive at any conclusions, but no doubt the various views expressed will help guide society thinking and planning on the subject of research.

"Projects of a cooperative nature that industry could work on rather than being assigned to college students" is what H. M. Elsey would like to see, he said. "Let's have voluntary research, not subsidized research," he suggested.

"I think manufacturers ought to participate financially in research," commented W. J. Finnegan. "User groups might also be happy to join in financial support of such projects," he indicated.

"If you think you need research then you should get into it," declared E. R. Kaiser, who directs the laboratory of the American Society of Heating and Air-Conditioning Engineers (formerly ASHVE).

He offered several suggestions. "A society shouldn't get involved in patentable equipment. Study basic projects instead."

"We are and will be faced with a shortage of engineering and technical talent. Industry, therefore, shouldn't duplicate efforts but ought to cooperate on research."

"Don't think about setting up your own laboratory until you get up to about \$200,000 annual volume devoted to research."

"You also need a staff man to administer research programs. A committee is too unwieldy."

"And there's also the problem of what to do with research when it's done. You can't just prepare a paper and forget about it. You should go back to the sponsors and explain in detail what has been accomplished," Kaiser said.

"Many investigations made for ASRE haven't always met the needs of the society," commented Dr. Walter O. Walker. "We need more money for research than has been available in the past. Research must be an established policy of ASRE."

A five-year program based on a \$25,000 annual budget was urged by Dr. Walker.

"Research efforts can best be directed towards standards," said D. D. Wile. "This society is better known for its standards than anything else. We should spend our limited funds in setting up standards," he suggested.

Optimum size of research grants is \$1,500, according to H. C. Diehl. Little can be accomplished with less than that amount, and larger grants are seldom necessary, said the director of the Refrigeration Research Foundation.

"A \$500 grant doesn't even get the bottom wet," Diehl commented.

"All our projects now are bogging down due to lack of manpower in colleges as the result of military needs," pointed out D. C. McCoy. "We may have a latent source of research manpower in retired individuals."

C. W. Phillips of the National Bureau of Standards suggested, "an association such as ASRE can tap government research personnel and facilities—something private industry can't do."

Joseph E. Lewis Plant Opens

LACONIA, N. H. — The Joseph E. Lewis Co., Inc. of Baltimore has opened a new plant here. The \$60,000 factory will concern itself with the finning, coiling, and bending of copper tubing for "Freon" condensers.

Salute to a Sale

It's odd why almost everyone takes for granted the great diversity of talents required to bring forth a manufactured product. Yet, little or no thought, and even less awareness, is given one extremely important factor from which comes our entire business existence—the Sale.

A sale, regardless of what is sold, represents the ultimate realization of success and satisfaction to the great band of men spirited enough—worthy enough—to bear the title "Salesmen". Each hard-won prospect, every successful closing, reaffirms to these men their faith and sense of reward—the stuff on which they truly grow rich.

Let's leave to others the everyday statements used to describe a sale. Here, let's speak of the human, seldom-mentioned forces which yield, one to the other, to finally produce the true foundation of our competitive business existence—the Sale.

A sale is manufactured with the power of faith—faith a man has in the people who guide him intelligently in his daily efforts—faith in the sureness that his product or service is right—right for the purchaser and even more important, right for him to honestly give of his time and fierce conviction of quality and integrity.

A sale is clothed in work. A sale is not born, but is hewn from the stouter things of life. A sale is work

that sometimes takes the lonely form of distant hotel lobbies and restaurants—that makes bearable the long, weary hours at a convention booth or behind the wheel of a rented car headed for the next call. A sale is a taskmaster that demands of its victors—patience, hope, planning and even a little prayer now and then.

Most sales really begin long before any dotted line is signed. They are born within men, through the canny ability to recognize a basic need or offer a better way of doing things. A sale is proof of, and may only come about, through careful concentration and preparation, intelligence and resourcefulness.

A sale requires unending support that necessarily must come in varying forms. From management, tools we'll call constructive encouragement, leadership and wisdom. From home, in the form of understanding, love and security. Lastly, from within, through a well placed will to do the job as it is set squarely and objectively in focus.

A sale walks proudly in the garb of reward. It may mean a long awaited new dress for a man's wife or the chance to get that rear-left fender bumped out. It might mean that a plant somewhere can now make their shoes or toasters or tennis rackets on a new and improved piece of equipment and thus help to create a quality product at a lower cost to all.

A sale is the vitality of today and the hope of tomorrow. If ever someone writes of the last sale made—that will surely proclaim to all in a bold and devastating hand that we no longer care to grow—that we no longer care to exist.

WOLVERINE TUBE, 1413 Central Ave., Detroit 9, Mich.



MARSH Instruments

THE SERVICEMAN LINE of Testing Gauges, Testing Thermometers, Timers, etc.

PRESSURE GAUGES and Dial Thermometers for all services.

MARSH-ELECTRIMATIC, Water Regulating Valves, Solenoid Valves.

MARSH INSTRUMENT COMPANY
Sales Affiliate of J. P. Marsh Corporation
Dept. D., Skokie, Ill.



WOLVERINE TUBE

DIVISION OF CALUMET & HECLA, INC.

Manufacturers of Quality Controlled Tubing and Extruded Aluminum Shapes

PLANTS IN DETROIT, MICHIGAN, AND DECATUR, ALABAMA. SALES OFFICES IN PRINCIPAL CITIES.

EXPORT DEPARTMENT, 13 EAST 40TH STREET, NEW YORK 16, N. Y.

Cooling a Rambling 6-Room Ranch-Type Home

4-Zone System Provides Economical Conditioning Of the Occupied Areas

By George M. Hanning

PEORIA, Ill.—Cooling a rambling ranch-type home in four separate zones with six 1-ton Yorkaire sealed circuit conditioners has worked out very satisfactorily for Ruyle Refrigeration Corp. here.

The rather unusual installation to fit a rather unusual house is giving complete customer satisfaction, comments Keith Ruyle, president of the York refrigeration and air conditioning distributorship.

Three of the 1-ton units are installed in the attic space in the 1½-story house. They are hooked together so that only as many of the units operate as are needed to keep the large living room, den, hallway, and kitchen cool, Ruyle explained.

A heavily insulated duct leads from the air handling unit of the air conditioner to four ceiling diffusers in the hallway, den, and living room. High wall grilles over the cupboards discharge cool air into the kitchen. Return air is pulled back to the unit through a duct in the stairwell leading to the basement.

CEILING DIFFUSER supplies cooling to the large living room of this Peoria, Ill. home, where Keith Ruyle, York dealer, has made a rather unusual installation.



A thermostat in the living room controls the operation of this system, Ruyle explained, while Minneapolis-Honeywell controls kick in one, two, or three units as needed to do the cooling job.

The basement of the home is under the main portion of the home, beneath the rooms mentioned above. However, there is no basement under the bedrooms at one end of the home or the utility room at the rear of the other end behind the kitchen and next to the garage.

Under these rooms, though, there are crawl spaces. A single 1-ton unit is installed in the crawl space under the utility room and

serves that room. It is controlled by a thermostat in the utility room.

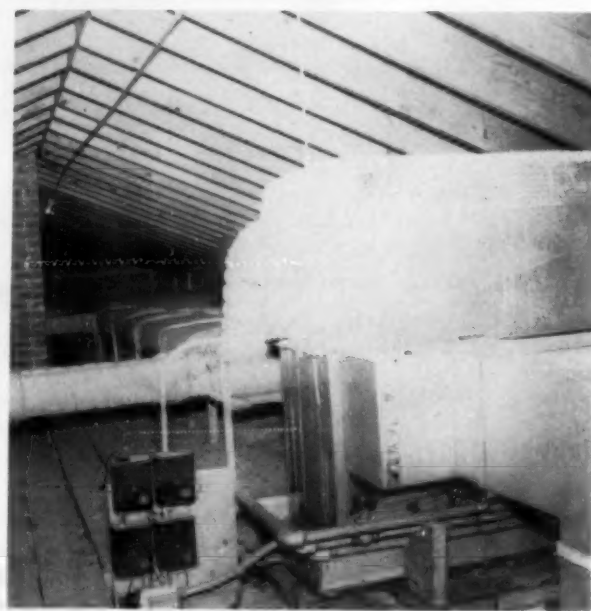
Another 1-ton unit serves the master bedroom and bath, while the third unit handles two small bedrooms. These are installed separately beneath the rooms they cool and are controlled by individual thermostats. Air discharge grilles are in the walls, while return air is at base of closets.

"With this type of installation," Ruyle commented, "the owner gets the cooling he wants where he wants it and when he needs it. During the day, the units that are handling the living area and possibly the utility room are op-

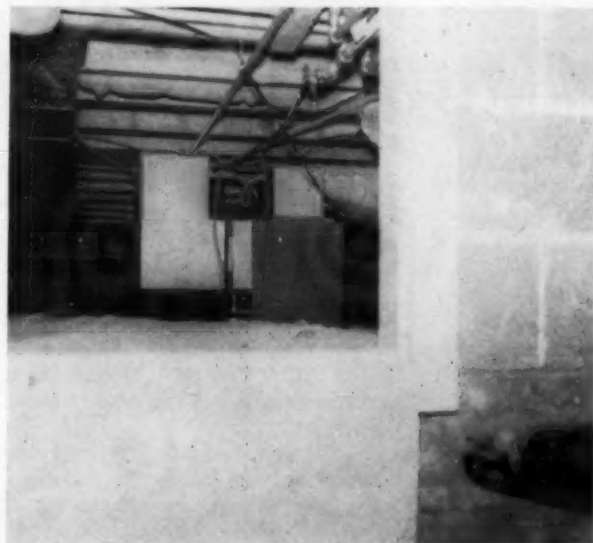
Residential Air Conditioning



THREE 1-TON UNITS have been installed in the attic and hooked together into a single system to cool the living room, den, hallway, and kitchen.



INSULATED DUCTS lead from the air handling unit to four ceiling diffusers in the hallway, den, and living room and to high wall grilles in the kitchen. Note drip pan under the unit to catch condensate.



LOOKING FROM THE BASEMENT into the crawl space under the master bedroom, one can see the 1-ton unit installed there to cool this bedroom and bath. Similar units are installed under two other bedrooms and the utility room.

erating and the others are off. At night, he can flick on the units in the bedrooms and turn off the ones in the other parts of the house. Or if the need arises, he can have cooling throughout the entire house."

"Best of all, our customer is very satisfied with it," he noted. He said that this sale resulted from a direct mail campaign he conducted directly to homeowners and to

those planning to build their own homes. This particular customer responded to the literature and had Ruyle work out the details with his architect.

Ruyle, who has operated his business here since 1949, is an old hand at the air conditioning business.

Before coming here, he had operated the York distributorship in Ottawa, Ill. for 10 years.

Prize Winners Announced In Carrier Residential Air Conditioning Contest

SYRACUSE, N. Y.—Grand prize trips for two to any part of the continental United States or to Acapulco, Nassau, Bermuda, or Mexico City have been awarded the four regional winners in Carrier's residential air conditioning sales contest, William A. Lake, residential sales manager, announced recently.

Recipients of the week-long all-expense paid vacations were L. N. Mathis, L. N. Mathis & Co., San Antonio, Texas, western regional winner and top retail salesman; Frank Ricci, A. Ricci Brothers, New York City, eastern region; Earl B. Travis, Air Conditioning

Sales & Service, Nashville, Tenn., southeastern region; M. G. Lehman, M. G. Lehman & Co., Lincoln, Neb., midwestern regional winner.

Participating in the eight-week sales campaign were 744 dealers and 233 distributor salesmen.

Distributors serving the regional winners, M. T. Gossett, M. T. Gossett Co., Inc. of Nashville; Bob Kotzebue, Bell-Kotzebue of San Antonio; George Saunders, Carlton-Stuart of New York City; and Joe Hannon of Air Conditioning Equipment Co., Omaha, will be presented with an oil portrait of Dr. Willis H. Carrier, "father of air conditioning."

Introducing New Space-Saving . . . Low Cost

Viking

Direct Drive BLOWERS

Incorporating Every Design Feature You've Requested

- **Maximum Air Flow** — open design of wheel disc permits free flow of air to the natural aerodynamic center of the wheel making it quieter and more efficient.
- **Sturdy Single Wheel** — unobstructed blade width with continuous strip blades. Blades and end rings are seam locked.
- **Blades Strongly Supported** — there are 72 locking points between the wheel and the disc.

PLUS the same scroll structural design that eliminates shipping damage and produces the strength that minimizes vibrations in conventional Viking blowers.

- Optional damper control or 5-speed control available for the Direct Drive Blower.
- Available with 1/6 or 1/8 horsepower shaded pole motors with thermal overload protector and a BX cable connector. Motor extends maximum of 1 inch beyond housing side. No pulleys necessary.

If you are designing compact, low-cost small furnace or 1, 1½, 2 ton air conditioners, you should get the full story on this New Direct Drive Blower immediately.

Write Us For The Full Story Today . . .



Viking's New Universal Lock-on Feet Optional at Extra Cost

Model Numbers	Dimensions without feet			CFM
	Depth	Width	Height	
D-99	14¾"	12¾"	15½"	1000 at .62" S. P.
D-97	14¾"	10¾"	15½"	800 at .65" S. P.

S. P. — Static Pressure

Note to Air Conditioning and Furnace Manufacturers

Viking
Air Conditioning
DIVISION OF THE NATIONAL RADIATOR COMPANY
3601 Walworth Ave., Cleveland 3, Ohio

Viking
Blower Packages

Viking
Blower Assemblies

Viking
Humidifiers

Other Viking
Products
Dehumidifiers
Attic Fans
Window Fans

IN FUTURE NEW HOME CONSTRUCTION such appendages as are pictured here may become familiar sights, as they will house certain components of a year-round residential air conditioning system. This particular addition houses the condensing unit for an "add-on" system in the Typhoon house in the air conditioned research village in Austin, Texas. Some of the results of studies made at the air conditioned research village will be discussed on Wednesday morning, Jan. 19, at the Home Builders Show in Philadelphia.



Ingersoll Conditioned Air Div. Announces Plans for Major Expansion of Operations

CHICAGO — Officials of the newly-formed Ingersoll Conditioned Air Div. of Borg-Warner Corp. have announced plans for an immediate and major expansion of the company's operations in the heating and air conditioning industries.

The new division's plant in Kalamazoo, Mich., will produce for 1955 an entirely new line of gas-fired warm air furnaces from 70,000 B.t.u. to 200,000 B.t.u. input in high-boy, low-boy, counter-flow, and suspended models.

The division's newly-designed 1955 model oil-fired furnaces range in sizes from 80,000 B.t.u. bonnet delivery to 165,000 B.t.u. bonnet delivery.

Air conditioners—both air-cooled condensers and water-cooled condensers—will be available as companion pieces in 2, 3, and 5-ton sizes. Gas and electric water heaters and incinerators also will be merchandised.

The gas-fired furnace line is built around a sectional heat exchanger with a built-in draft diverter and fully enclosed controls. A 10-year heat exchanger warranty is offered to the purchasing public. The smaller units will be available with either direct drive or belt-driven blowers. The entire furnace line has been livened with a selection of two-tone colors, according to the announcement.

The oil-fired units are also available in high-boy, low-boy, counter-flow, and suspended models and in new colors. Many improvements are being offered in both the burners and the furnaces, according to the company. These completely

factory-wired compact units can be installed in the smallest of utility rooms, it was stated.

"The Ingersoll Conditioned Air Div. will be expanded for the purpose of giving the best possible service to the heating industry," it was explained by J. H. Ingersoll, newly-elected president and general manager of the new Borg-Warner division.

"Our new program will include a system of warehouse stocks for immediate service to the most important trading areas."

R. B. Crean is vice president and assistant general manager of the Conditioned Air Div. F. S. Gombert, as manager, is directly responsible for the divisional operation.

The Kalamazoo plant, under Gombert's direction, will manufacture all the furnaces and air conditioners which the division will merchandise.

Lincoln Sales Will Distribute Airtemp In Baltimore Area

DAYTON — Airtemp Div. of Chrysler Corp. has announced the appointment of Lincoln Sales Corp., Baltimore, as exclusive distributor for Chrysler residential and commercial air conditioning equipment.

The new distributor covers Maryland and portions of West Virginia. C. Howard Buchwald is president of the firm.

Lincoln Sales, specializing in major appliances, is one of the oldest appliances distributors in Baltimore, having served the trade for 35 years. In addition to air conditioning, the firm distributes Norge home appliances and American Kitchens equipment. Sales activities are divided into the Dealer Div. and Builder Div., both headed by Henry A. Altpeter, vice president in charge of sales.

To emphasize and exploit the importance attached to residential and commercial air conditioning business, Lincoln has acquired the services of Edward Schlesinger as air conditioning sales engineer. In this capacity he will serve as consultant as well as sales representative.

PRESSTITE Insulation Adhesives

- quick, permanent adhesion
 - long-lasting high bond
 - excellent resistance to temperature extremes
 - brush, spray or flow
- See your wholesaler or WRITE

PRESSTITE ENGINEERING CO.
3774 CHOUTEAU AVE. • ST. LOUIS 10, MO.

Seel Heads Worthington Residential Section

HARRISON, N. J.—Frederick B. Seel has been appointed chief engineer of the Residential Section, Air Conditioning & Refrigeration Div. of Worthington Corp., it was recently announced.

Seel, who will make his headquarters at Holyoke, Mass., will be in charge of design and development of cooling equipment for homes and their adaptation to combination heating and cooling units.

Prior to his present appointment, Seel served as product engineer in charge of industrial air handling units at the corporation's Holyoke Works.

Seel holds a Bachelor of Science degree in mechanical engineering from the University of Massachusetts. A Navy veteran of World War II, he joined Worthington in 1951. Previously, he had been associated with Westinghouse Electric Corp., East Springfield, Mass., and at one time, was in charge of manufacturing operations at Firearms International Corp., Washington, D. C.

He is a member of the American Society of Refrigerating Engineers and the Engineering Society of Western Massachusetts.

Residential Air Conditioning

National Radiator and U. S. Radiator Arrive at Basis for Accomplishing Merger

JOHNSTOWN, Pa.—A basis for merging The National Radiator Co. here and United States Radiator Corp., Detroit, has been approved by directors of both companies.

An announcement by the presidents of the heating and air conditioning equipment firms indicated that stockholders of their companies will be asked to approve the merger at special meetings to be called in the near future.

Under the ratio of exchange agreed upon, after approval by the stockholders, each share of National Radiator stock will receive 1½ shares of the consolidated company.

Each common share of U. S. Radiator will receive ½ share in the consolidated company.

National Radiator had sales of \$20,569,000 for the fiscal year ended March 31, 1954, with a net profit of \$856,400. United States Radiator for its fiscal year ended Jan. 31, 1954, reported net sales

of \$29,576,000 and a net loss of \$42,400. Substantially higher earnings were said to have been gained by each company for the current fiscal year.

While National Radiator and U. S. Radiator are manufacturers of equipment for the domestic and commercial heating industry, including steel and cast iron boilers, heat radiation, and convection products, both have substantial diversified activities in other fields.

National has been producing metal powders, heat transfer equipment, and, since 1953, the Viking line of blowers and humidifiers.

U. S. Radiator is also engaged in the manufacture and sale of packaged steam generators. Through its Drayer-Hanson subsidiary, it has been an important factor in the West Coast air conditioning field.

National Radiator has five plants and there are nine U. S. Radiator plants.

new . . . amazing

Aqua-Fog

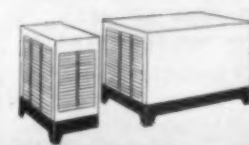
evaporative condensing unit

- Eliminates spray nozzles and pumps
- Easy to install—saves space
- Saves water by 97%
- Cuts power costs as much as 25%
- Lower maintenance—fewer service problems
- Eliminates unsightly water towers

NOW . . . Completely New . . .

a remarkable advance to improve any air-conditioning or refrigeration system . . . at a big savings! Aqua-Fog is a different type of evaporative condenser, a result of years of research and development. It uses forced air and water to achieve an exceptionally high degree of heat transfer, and at the same time, reduces operating costs. The system is especially effective for use with small units of two to five-ton capacity in central residential systems, stores, offices, restaurants, motels, chain stores, florist shops, taverns, etc. Ideal for use with all types of commercial refrigeration.

Choose from two models!



Aqua-Fog is available with or without compressor unit, and in a variety of specifications to fit individual needs.

Check These Advanced Features!

Uses less water—Slashes water consumption as much as 97%; no worry about water shortages.

Cuts power costs—Lower head pressure, reduced power consumption.

Saves space—Compact one-unit package can be located remotely inside or outdoors.

Easy to install, service—Turbulator is self-cleaning, no complicated equipment to cause trouble.

Eliminates water tower—No more costly and unsightly water tower to maintain.

WRITE FOR detailed information catalogue.



SEE THE AGUA-FOG — AIR CONDITIONING EXPOSITION — PHILADELPHIA JAN. 24-28

unquestionably VIKING!

A glance tells even the casual observer that this example of wood carving from the bow of a ship is unquestionably VIKING.

Today, men in the commercial refrigeration and air conditioning industry know that the finest copper tubing available for the industry is unquestionably VIKING. VIKING craftsmen work constantly to produce the very finest copper tubing . . . made to the most rigid standards . . . a tubing worthy of the name VIKING.

Viking copper tube is annealed with precision uniformity insuring speedy, efficient, trouble-free fabrication and strength.

Triple-sealed Viking tube remains extremely dry and absolutely free of dirt. The seal is made to pass through any opening large enough for the tube itself.

Viking refrigeration tubing is soft and pliable—can be formed, flared and expanded quickly without danger of fracturing and splitting.

Write for prices and details.

VIKING copper tube co.
Cleveland 14, Ohio
PRECISION DRAWN SEAMLESS
COPPER AND ALUMINUM TUBING

Current Literature

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Wabash Catalogs Driers, Strainers, Tubing, Parts

—KEY NO. Q-130—

CHICAGO—A complete revised catalog of all copper driers, strainers, oil separators, capillary tubes, and various refrigeration parts has been issued by Wabash Corp. here.

Catalog No. 551 contains descriptions and specifications of the complete line of Wabash products, including such new items as refillable driers and solder connection strainers.

New Drier Designs, Filter Sizes In McIntire Catalog

—KEY NO. Q-131—

LIVINGSTON, N. J.—A new 12-page catalog has been published by The McIntire Co. here, giving latest information, part numbers, dimensions, and capacities of the enlarged line of "DFN" driers, filters, strainers, charging lines, water bubblers, water glass fillers, water regulating valves, vibration absorbers, and hose for pull-out compartments.

Included in the catalog are new drier designs, additional filter sizes, and a new selection chart for easy, accurate selection of cartridge type driers up to 100-ton capacity.

New Products, Applications Described In B&G Catalog

—KEY NO. Q-132—

MORTON GROVE, Ill.—A new 24-page catalog (GK-954) featuring a complete line of equipment for forced hot water heating systems and chilled water cooling systems was announced recently by Bell & Gossett Co.

The company reports that new products and reference to many new applications makes this the most complete product catalog it has ever published. There are nine pages of information on a complete line of circulating pumps for dozens of applications, it was stated.

All-bronze pumps for circulating service water and centrifugal pumps for boosting water pressures in homes, factories, etc., are a few of the new applications. Valves, fittings, air vents, air tanks, and water heaters are also described in detail.

Brunner Parts Catalog Simplifies Ordering

—KEY NO. Q-133—

UTICA, N. Y.—Brunner Mfg. Co. customers now are finding new ease in ordering genuine Brunner replacement parts through a complete refrigeration service parts reference catalog.

Brunner has forwarded the carefully-compiled catalog keyed for general nomenclature to its refrigeration wholesalers, distributors, and salesmen.

"Featured in the catalog are exploded views of all Brunner compressor parts to enhance easy ordering," the company said. "The price for such a complete open type refrigeration parts list and parts price list is 50 cents plus postage."

"At the same time, through a new packaged parts program, Brunner small replacement parts indexed in the catalog are now carefully packed and boxed in steel edged boxes for stacking ease on sales outlet shelves."

"Brunner customers also are insured added efficiency on orders and added protection in shipping and handling through this program. In addition, they find the attractive orange and black Brunner parts boxes that follow Brunner's color scheme a splendid eye-catcher counter display."

Among the suggestions in the introduction of the parts catalog in reference to ordering replaceable parts is the order of complete assemblies wherever possible. Brunner said it is endeavoring to keep these assemblies in stock for immediate shipment.

General Tire Issues Buying Guide on Rubber, Plastics

—KEY NO. Q-134—

WABASH, Ind.—The "ABC's" of molded and extruded rubber and extruded plastics are covered in a 16-page buying guide available from General Tire & Rubber Co.'s Industrial Products Div.

Designed to help both technical and non-technical personnel, the new book contains helpful basic information—specifications, terms, definitions, performance characteristics, tolerances, and tables of the properties available in the many types of common rubber and plastics compounds.

Worthington Offers Bulletin On Packaged Liquid Chillers

—KEY NO. Q-135—

HARRISON, N. J.—Packaged liquid chillers is subject of new bulletin offered by Worthington Corp.

Designed for air conditioning and industrial application, the Worthington line of liquid chillers range from 7½ to 150 hp. in a variety of models and combinations. Pictorially and graphically illustrated, the new bulletin (C-1100-B52) gives specifications, dimensions, and applications of various sized liquid chillers.

Catalog Describes Acme's 'Flow-Cold' Cooling Towers

—KEY NO. Q-136—

JACKSON, Mich.—Acme "Flow-Cold" cooling towers are described and illustrated in detail in an eight-page catalog offered by Acme Industries, Inc. here.

Typical annual water savings achieved through use of these towers are given for each of the six models, 2 through 15 tons capacity. Advantages of Acme's all-metal construction are stressed.

New and simplified selection procedure, employing accurate, easy-reading curves to specify all principle factors, is given along with a typical selection example, the company said.

Booklet Is Complete Index To 'Aerocor' Insulations

—KEY NO. Q-137—

TOLEDO—A new booklet which combines under one cover description and illustrations of various types of "Fiberglas Aerocor" insulation is available from Owens-Corning Fiberglas Corp. here.

The eight-page booklet is a complete index to all Aerocor insulations. These products have a low thermal conductivity and high sound absorption qualities yet are light in weight, non-combustible, clean, and easy to handle, the company said.

Aerocor, a soft, resilient, blanket-type insulation, is produced by Owens-Corning, in various sizes for a multitude of uses.

Commercially it is used as insulation for hot or cold pipes, air ducts, metal buildings, furnaces, home appliances, railroad cars, aircraft, automobiles, trucks, trailers, and ships, as a siding cushion for homes, and as sound absorbing pads for metal ceiling pan systems. It also is sold from a rack in retail stores for the do-it-yourself trade and many heat and sound control applications around the home.

Sherer Issues Spec Sheets On Three Open-Type Cases

—KEY NO. Q-138—

MARSHALL, Mich.—Scherer-Gillett Co. has available new four-color specification sheets on its model 3506MB 6-ft. dairy case and models 3606MB-SF and 3606MB-GF, 6-ft. cases for frozen foods or ice cream. All models are of the open type.

Revised Product Bulletin Available from Trane

—KEY NO. Q-139—

LA CROSSE, Wis.—The Trane Co. has announced that its revised Product Bulletin PB-290 is now available upon request.

All new products, as well as existing ones with improvements, are covered both editorially and pictorially.

Shown are the new large size "CentraVacs," "Cold Generators," duplex compressors, new "Uni-Trane" models, the Trane accessible hermetic compressor as used in self-contained air conditioners, new "Climate Changers," new "Delta-Flo" fin coils, baseboard convectors, and many other Trane products.

The bulletin is an "index" of Trane products. It does not attempt to give complete information on each product. More detailed data on any of the products discussed in this bulletin can be obtained by writing to the company.

New Style and Colors For Console Heater Line

—KEY NO. Q-1310—

LOUISVILLE, Ky.—Technical details and a description of new styling and a wide range of colors for the Herman Nelson line of console heaters is available in Bulletin 727 by the American Air Filter Co., Inc.

The new console heaters include a removable base for wall-hung units; key-operated two-speed key

switch that is operated through the grille, removing the need for an access door; a one-piece front panel for fully recessed wall or ceiling application; and, easy access to all parts by the removal of only two chrome-plated key-operated screws on the front panel.

Heaters are offered with a basic color of Nelson grey. Units are also available in seven different colors and in two-tone designs. Console heaters are designed to match the color schemes of unit heaters and ventilators.

Bulletin describes how units may be floor mounted, wall mounted, and semi-recessed, full-recessed, ceiling mounted, ceiling semi-recessed and full-recessed, and wall inverted.

6th Edition of Air-Moving Appliance Guide Published

—KEY NO. Q-1311—

TORRINGTON, Conn.—The Torrington Mfg. Co., producer of precision-type fan blades and blower wheels, recently announced plans for the sixth annual edition of its cooperative air-moving appliance guide, "How to Have Comfort from Moving Air."

First published in 1950, Torrington's 200-page "Gold Book" has become a reference guide for architects, builders, wholesalers and retailers, contractors, power companies, and feature editors, the company said.

Divided into more than 20 chapters, the Torrington book explains the function and installation suggestions of all types of air-moving appliances, including room air conditioners, window ventilators, attic fans, evaporative coolers, kitchen and bathroom ventilators, home and portable heaters, and central heating systems.

Participation in the reference book is open to manufacturers of Torrington air-moving appliances. Full details may be obtained from Torrington representatives or directly from the company.

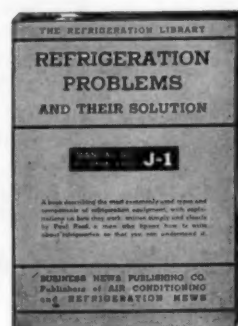
Company spokesmen report a controlled circulation of 50,000 copies for the 1955 edition.

REFRIGERATION PROBLEMS

AND THEIR SOLUTION

by PAUL REED

ONLY \$1⁵⁰ EACH



Make it work! When you're stopped by a tough problem use these practical reference books with a load of factual information about every refrigeration problem you'll meet as a serviceman or salesman. For years Paul Reed has been supplying the answers in his weekly column in AIR CONDITIONING & REFRIGERATION NEWS.

Now this fund of knowledge can be yours in this 5-volume set. Order all now—or one at a time.

BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich.

Please send Paul Reed's books as follows:

..... copies J-1, \$1.50 each. copies J-2, \$1.50 each.
..... copies J-3, \$1.50 each. copies J-4, \$1.50 each.
..... copies J-5, \$1.50 each.

Check for \$..... enclosed* ☐ Bill me.

Name

Address

City..... Zone..... State.....

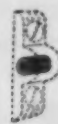
*Books sent post-paid if remittance accompanies order.

1-17-55

The EXTRA FEATURES you get in

Service-Master

make it your best service body buy

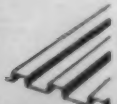


"FREEZE-FREE" HINGES
Bronze bushings are provided in door hinges to positively prevent binding.

CONCEALED FENDERS
Dirt, sludge, and water—thrown by the tires—can't reach compartment walls.



"HIGH-LOW" FLOOR
Provides added strength—easier handling of heavy loads.



"NO-BOUNCE" RIMS
The hinged cover keeps parts in the bins, and provides an extra storage shelf.

"PUDDLE-PROOF" CARGO AREA
A full-width floor drain is built into the head panel.

Service-Master's competent look helps sell your service... reflects your discriminating taste.

Send for this **FREE BOOKLET** describing all the extra features you get in Service-Master.



Compare Service-Master... feature by feature... with any other make. See why Service-Master is the first choice of servicemen in all parts of the country.

Available in ½, ¾, 1, and 1½ ton sizes.

McCABE-POWERS AUTO BODY CO.

5900 NO. BROADWAY • ST. LOUIS 15, MO.

POWERS

Send me the Service-Master "EXTRA FEATURES" booklet... and have nearest distributor furnish me local delivered prices.

Name

Company

Address

City..... Zone..... State.....

BUILT TO OUTLAST SEVERAL CHASSIS

Refrigeration Problems and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Cleaning Air (4)

The means of cleaning air, previously described, can be regarded as "mechanical" methods, in which the particle of dust or other material in the air is removed by mechanical means. It strikes a plate and is retained by the porous structure of the material of the plate, or by a sticky, or "viscous" material with which the plate surface is covered.

The air may pass through a maze or labyrinth of fibers covered with a viscous substance to which the particle adheres. It may strike and be absorbed by the water on a plate kept wetted by a spray or flood of water. It may be physically washed out of the air as it passes through a water spray. Or the contaminating particles may be removed by two or more of these methods in combination.

ELECTRIC PRECIPITATORS

Some 20 or more years ago an electric method was devised, using what are known as electric or electronic precipitators. The advantages of this method are its ability to remove microscopically fine particles, and its low pressure drop.

It is probably the most efficient of all methods of cleaning air, from the standpoint of its ability to remove particles of all sizes from the air stream. It is said to be able to remove particles as small as one thousandth of a micron in diameter and that is extremely small when we consider that a micron itself is one twenty-five thousandth of an inch.

In fact, the electric precipitator is so effective in removing very small particles, that other cleaning methods, such as viscous filters, are sometimes used ahead of the precipitator, to remove the larger particles of dust, lint, pollens, soot, etc., thus leaving to the collector plates of the precipitator the extremely fine particles of smoke, fumes, and similar contaminants that are beyond ordinary filtering methods.

Electric precipitators are therefore unexcelled for removal of tobacco smoke, one of the most difficult contaminants to remove from air. Also, electric precipitators are almost always used when it is necessary to clean air to a very high purity, such as in rooms where delicate instruments, optical equipment, and similar apparatus are assembled. They are excellent also for cleaning air hygienically, for they can remove molds, some bacteria, and other micro-organisms.

HOW ELECTRIC PRECIPITATORS WORK

The principle of operation of the electric precipitator is rather

simple. The air is first passed through an electrically charged field, where the particles acquire a charge of static electricity—usually positive. It is then said to be ionized.

The air then passes on between a bank of parallel "collector" plates which are oppositely charged. The particle is therefore attracted to the collector plates and held there by a film of viscous oil.

There is very little restriction to air flow; consequently very low pressure drop.

Very high voltages are used in the ionizing field—up to 10,000 or 12,000 volts being common; and perhaps one-half that voltage used on the collector plates. These high voltages are obtained by transformers, and the current is then rectified to DC by rectifiers, usually of the electronic tube type.

These high voltages can of course be quite dangerous to maintenance and service engineers. The access doors are usually marked "Dangerous—High Voltage" and should be electrically interlocked, so that opening the access door necessarily opens the electric circuit to the precipitator.

MANUAL AND AUTOMATIC PRECIPITATORS

Electric precipitators are made in several styles, and are available in both manually and automatically cleaned types. In the manual types, the precipitator must be turned off and the collector plates removed, washed, re-oiled, and replaced manually. Unless the service is very heavy, this may not have to be done often enough to be much of a maintenance problem.

Precipitators are also available in types in which the collector plates are washed and re-oiled automatically, the interval between cleaning being controlled by an electric timer.

In one style, the collector plates are arranged horizontally on an endless chain carried on sprockets, similar to the Continuous Curtain Type of filter described last week. The collector plates travel down the upstream side of the apparatus, pass through a bath of oil in a tank at the bottom, and rise on the downstream side, where they are again exposed to the air.

In another automatically cleaned type of electric precipitator, the plates remain stationary but are periodically washed and oiled. The timer first turns off the electric charge; then a water spray travels across the face, thus washing the dirt, etc., from the collector plates; after a short drying period, another set of nozzles spray oil on the plates; and finally the charge is turned back on.

Frequency of cleaning, and the length of time spent in washing and oiling the collector plates, can

be governed by adjusting the timer in accordance with the needs of the individual installation.

The initial cost of the equipment and its installation excludes the electric precipitator from most small installations. The cost of maintenance may be found quite high on applications on which the quantity of material to be removed from the air is high.

However, as mentioned earlier, the electric precipitator is often the best choice when the air must be cleaned of very tiny particles that will be found difficult if not impossible to remove by other methods.

MAY REDUCE REFRIGERATION REQUIRED

Despite the high first cost, and possibly a high maintenance cost, the electric precipitator may be cheap in the long run on those installations which, because of smoke or odors, require very high percentages, often 100%, of outside air for ventilation.

In humid weather, outside air contains a very large amount of moisture, which must be removed in order to condition it for human comfort or even for most air conditioning applications for industrial processing. Moisture removal from the outside air involves heavy additional load; often doubling the tonnage of the refrigerating equipment that would be required for the installation if most of the air supplied to the conditioned space could be recirculated.

In those cases where the amount of outside air can be drastically reduced by adequately cleaning and recirculating most of the air, the electric precipitator can easily pay for itself in a relatively short time.

ODOR ADSORBERS

On the smaller installations, odors may also be a serious problem, requiring very high percentages, often 100%, of outside air for ventilation, and requiring larger equipment for this reason.

On these small applications, the cost of an electric precipitator can not be justified, and indeed, they may not be available in such small sizes.

For these small systems, the amount of outside air for ventilation, and consequently the original cost of the equipment and the cost of operation, can often be materially reduced by odor adsorbing materials placed in the air stream.

These may be in canister form, or may be similar in appearance to and sometimes interchangeable with, as far as dimensions are concerned, the ordinary dry or viscous type air filter. However, the odor filter is filled with an adsorbent material, usually activated carbon, which has the property of adsorbing odors in much the same man-

ner that silica gel or activated alumina in refrigerant driers removes moisture from the refrigerant. They can adsorb up to one-half of their weight in odor particles, which represents a lot of odor.

Moreover, the material in these odor filters can be reactivated and the odors driven out. This is done by baking them at about 1,000° F., although the manufacturers of odor filters recommend against reactivation in the field, and offer a factory re-activating service at nominal cost.

For most economical use, odor adsorbers should be used in air that has already been cleaned by filters or other cleaning methods, so that the surface of the odor adsorbent will be kept free to perform its purpose of odor removal, rather than to remove dirt, dust, lint, etc.

UNIFORM AIR DISTRIBUTION TO AIR CLEANERS

In all types of air cleaners—air filters, air washers, and electric precipitators—the air to the air cleaner should be evenly distributed over the upstream face of the device; otherwise, one side will load up quickly, and the other side will be doing very little.

If it is necessary to have ducts enter the air cleaner from the side or at an angle, use duct turns or other deflectors, to evenly distribute the air to the air cleaner.

(To Be Continued)

Superior Valve Names Reese Rep. in Southwest

PITTSBURGH—Olan C. Reese Co., as successor to the Charles A. Myers Co., has been appointed an exclusive representative for Superior Valve & Fittings Co.

Olan C. Reese, president, was most recently a partner in the Charles A. Myers Co., a company which has been dissolved. The Reese sales organization will represent the Superior line in Texas, Oklahoma, New Mexico, Arkansas, and Louisiana.

American Potash Names McDermott

LOS ANGELES—The Aerosol & Refrigeration Div. of American Potash & Chemical Corp. has appointed Harold A. McDermott, Sr., as its sales representative in New York State, excluding metropolitan New York.

In addition, McDermott will handle the company's aerosol and refrigerants sales in Burlington, Vt.

Krzes Files Firm Name

BUFFALO—A business name has been filed in the Erie County clerk's office for the Allied Air Conditioning & Heating Co., 133 School Rd., Kenmore, by Casey S. Krzes.

**HEAT-X
INTERCHANGERS
WITH INNER-FIN...
ASSURE...**

MAXIMUM SUBCOOLING

MINIMUM PRESSURE DROP

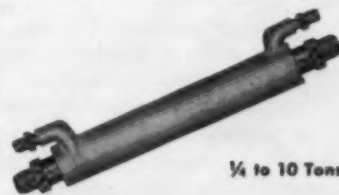


Heat-X Interchangers give you "most" where it's needed... maximum subcooling; and, "least" where it's needed... minimum pressure drop. Highly efficient longitudinal suction line with Inner-Fin—Heat-X exclusive—makes these top usability results possible:

- No internal joints
- Separate suction line tube
- Separate liquid line tube
- Sized to match condensing unit
- Straight-through suction connections

... and these Advantages:

- Eliminates Flash Gas
- Reduces Oil Troubles
- Improves Low Temperature Jobs



1/4 to 10 Tons



7 1/2 to 100 Tons

Send For Specification Sheets Today!

HEAT-X INC.

BREWSTER • NEW YORK

Over 70 Million Ranco Controls

Production of over 70 million controls is an amazing record in itself. But Ranco's real record is in the performance of those controls... performance that's bound to make them more popular by far than any other. Try Ranco and see for yourself. You'll find a Ranco Control for every job... a Control that cuts installation time, builds your service reputation, earns you extra profits.

To be sure... specify a Ranco Control for every installation.

Handy Replacement Reference
No. 1544 lists almost 5,000 replacement controls... the most complete line in the industry. Purchase yours from your Ranco wholesaler.

Ranco Inc.
COLUMBUS 1, OHIO
WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

SUMMARY FOR OCTOBER AND FIRST TEN MONTHS, 1954

Complete Electric Household Refrigerators Only—Sales by Sizes—Units

OCTOBER (15 Companies)

Sizes	Domestic	Canadian	Foreign	Total
1. Less than 4 cu. ft....	.....	.....	.....	.....
2. 4 cu. ft.	1,005	.....	8	1,013
3. 5 cu. ft. ....	.....	.....	33	33
4. 6 cu. ft.	3,124	1	436	3,561
5. 7 cu. ft.	16,243	101	1,996	18,340
6. 8 cu. ft.	37,241	173	7,234	44,648
7. 9 cu. ft.	20,785	729	1,819	23,333
8. 10 cu. ft.	22,598	11	2,161	24,770
9. 11 cu. ft.	28,313	53	1,153	29,519
10. 12, 13 cu. ft. and up..	44,458	11	1,067	45,536
11. Total	173,767	1,079	15,907	190,753
Refrigerators Having Two Exterior Doors (All Sizes Included In Above)	25,335	16	774	26,025

FIRST TEN MONTHS, 1954 (15-16 Companies)

Sizes	Domestic	Canadian	Foreign	Total
1. Less than 4 cu. ft....	.....	.....	.....	.....
2. 4 cu. ft.	16,301	1	897	17,199
3. 5 cu. ft.	400	26	151	577
4. 6 cu. ft.	34,010	205	10,587	44,802
5. 7 cu. ft.	189,771	6,934	19,900	216,605
6. 8 cu. ft.	631,016	12,599	67,084	720,699
7. 9 cu. ft.	458,348	7,463	36,640	502,451
8. 10 cu. ft.	497,533	16,428	17,534	531,495
9. 11 cu. ft.	442,671	7,054	14,759	464,484
10. 12, 13 cu. ft. and up..	405,607	4,745	10,726	421,078
11. Total	2,685,657	55,455	178,278	2,919,390
Refrigerators Having Two Exterior Doors (All Sizes Included In Above)	322,637	1,652	8,050	332,339

Participating companies: Admiral Corp.; Appliance & Electronics Div., Avco Mfg. Corp. (Crosley & Bendix Divs.); Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div., American Motors Corp.; Norge Div., Borg-Warner Corp.; Philco Corp., Appliance Div.; Quicfrez, Inc.; Seeger Refrigerator Co.; Servel, Inc.; Westinghouse Electric Corp.; A. J. Lindemann & Hoverson Co. (out 2-1-54).

Halpin Heads Norge New Builder Sales

CHICAGO — Appointment of Joseph P. Halpin as manager of the new builder sales division of Norge Div. of Borg-Warner Corp. has been announced by R. C. Connell, vice president of sales.

Halpin will head sales of specially-developed Norge appliances to apartment house owners, motel operators, housing developers, trailer manufacturers, and builders.

For the last year Halpin was contract division manager for Admiral Corp. Before that he was associated for five years with Crosley Distributing Corp. as sales manager of its apartment house and builders division for the New York City metropolitan area.

Alice Holton Promoted By Perfection Stove

CLEVELAND—Perfection Stove Co. announces the promotion of Mrs. Alice Holton to the post of director of public relations. For the past eight years Mrs. Holton has served as the company's publicity director.

A graduate of Ohio State university with a B.S. degree in agricultural engineering and a minor in journalism, Mrs. Holton has been engaged in newspaper and public relations work for the past 17 years.

Philco Announces Prices On Refrigerators, Freezers And Air Conditioners

PHILADELPHIA—Prices on its new refrigerator, freezer, and room air conditioner lines have been announced by Philco Corp. here. The new models were described in detail in the Jan. 10 issue of the NEWS.

Suggested list prices follow:

REFRIGERATORS

Model	Capacity	Suggested List Price
K-1259	12.6 cu. ft.	\$549.95
K-1258	12.2 cu. ft.	529.95
K-1257	12.6 cu. ft.	499.95
K-1159	10.5 cu. ft.	459.95
K-1158	10.2 cu. ft.	429.95
K-1157	10.5 cu. ft.	399.95
K-1156	11.3 cu. ft.	349.95
K-1154	11.3 cu. ft.	299.95
K-1064	9.7 cu. ft.	279.95
K-1062	9.7 cu. ft.	249.95
K-852	8.1 cu. ft.	219.95
K-752	8.1 cu. ft.	179.95

FREEZERS

V-1452*	14 cu. ft.	369.95
V-1455*	14 cu. ft.	469.95
V-1945*	19 cu. ft.	599.95
V-2545*	25 cu. ft.	699.95
H-852†	8 cu. ft.	229.95
M-855†	8 cu. ft.	299.95
H-1355†	13 cu. ft.	399.95
H-1358†	13 cu. ft.	449.95
H-1858†	18 cu. ft.	499.95
H-1858†	18 cu. ft.	549.95

*Upright type.
†Chest type.

AIR CONDITIONERS

284-M†	¾ hp.	399.95
152-M	1½ hp.	499.95
106-M	1 hp.	429.95
86-M	¾ hp.	379.95
105-M	1 hp.	419.95
85-M	¾ hp.	369.95
104-M	1 hp.	389.95
84-M	¾ hp.	349.95

†Windowlet.

Worthington Ups Feldmann and Kehane

HARRISON, N. J.—Walther H. Feldmann, vice president in charge of sales of Worthington Corp. for the past four years, has been named executive vice president, the board of directors announced recently.



T. J. Kehane

He succeeds Edwin J. Schwanhauser, whose election as president of Worthington was announced earlier.

Thomas J. Kehane, assistant vice president and general sales manager, succeeds Feldmann as vice president in charge of sales. Charles A. Butcher was named vice president for planning.

Feldmann, a graduate of the Baltimore Polytechnic Institute, joined Electric Machinery Mfg. Co. of Minneapolis in 1922, rose to vice president and general manager in 1940 and president in 1944. Electric Machinery became a subsidiary of Worthington in 1944 and Feldmann was made vice president in charge of sales of Worthington in 1950.

Kehane has been with Worthington since 1915.

A graduate of Iowa State college, Butcher was associated with Westinghouse Electric Corp. in executive capacities throughout the country for many years. He served as vice president and general manager of Crocker-Wheeler Electric Mfg. Co. for five years prior to joining Worthington in 1950 as assistant to the president.

Radio Distributing Starts New Building

DETROIT—Radio Distributing Co., Detroit wholesaler for more than 30 years, has started construction of another new building on its property at the southeast corner of Woodrow Wilson and Pilgrim.

According to George N. Tobias, president of the concern, which operates throughout the lower peninsula of Michigan, the new structure will be used entirely for office, showrooms, and parts and service departments.

The two-story building will adjoin the present Radio Distributing Co. warehouses which have occupied a portion of the site since 1945.

The new building will feature two complete showrooms for the display of the company's wholesale lines of major appliances, radio, television, and floor-coverings. Among products handled by the firm are Norge appliances.

The appliance and radio-TV showroom will be on the first floor with all sales and accounting offices placed for fast handling of orders, said Tobias.

A second showroom will be located on the upper level for the company's extensive line of hard surface floor coverings and carpet, together with all sales offices for that division of the business.

WANTED NEW SURPLUS UNITS AND COMPRESSORS ½ H.P. TO 50 H.P.

Also expansion valves, fittings, belts, controls, motors, other refrigeration parts, for cash!

TRACO INDUSTRIAL CORP.
461 W. 126th St., N.Y.C.
UNiversity 5-7700

In air conditioning and refrigeration . . .



Scoring as in
BASKETBALL!

Basketball players wildly running around all over the floor—dribbling and passing the ball to one another—display tremendous activity. But it doesn't mean a thing unless somebody scores some baskets!

And so in advertising!

A lot of what appears to be activity can be attained by scattering a flock of ads through a long list of publications.

But the opportunity of scoring results will vary in accordance with the character of the publication in which the ads appear—its audience, its readership, and its influence with its audience.

With the highest subscription price of all publications in its field "THE NEWS" offers advertisers an audience of the biggest buyers and most successful salesmen in the entire air conditioning and refrigeration industry.

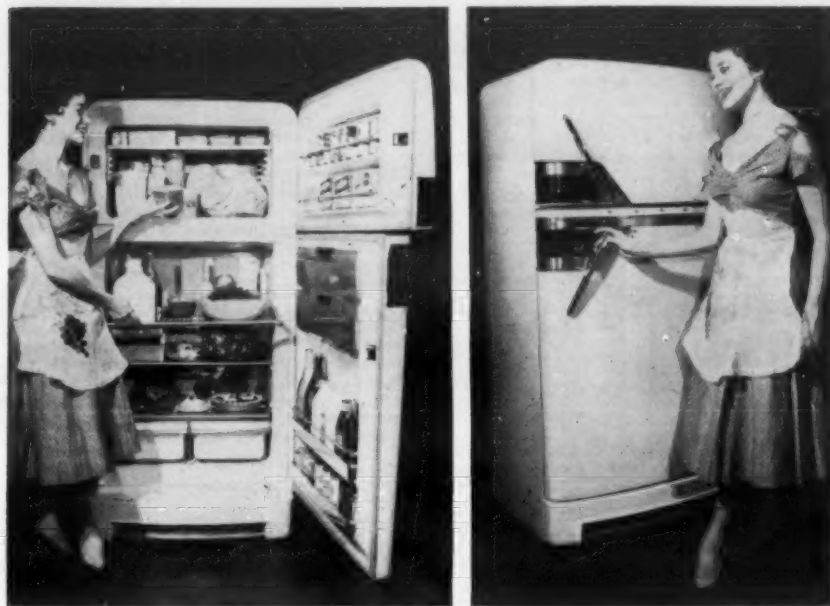
It offers audience—readership—and influence.

The "Scoring" publication for air conditioning, commercial refrigeration, household refrigeration, freezers, component parts, and materials.



450 WEST FORT ST. • DETROIT 26, MICH.

Offices: 521 Fifth Ave., New York 17; 134 S. LaSalle St., Chicago 3;
Commercial Bank Bldg., Berea, Ohio



NEW NORGE 13-cu. ft. two-door Customatic refrigerator-freezer provides capacity for 124 lbs. of frozen food and has more than 17 sq. ft. of space on its roll-out shelves and in the newly designed Handidor.

Norge Plan Gives Dealer 2% Extra--

(Concluded from Page 1, Col. 4)
According to Norge officials.

The six-model refrigerator line is headed by a 13-cu. ft. two-door refrigerator-freezer combination with storage space for 124 lbs. of frozen foods. The exclusive Norge "Customatic" refrigeration system that automatically adjusts the cabinet temperature regardless of humidity or weather is featured on three top models.

The five-model 1955 freezer line has been completely restyled. It consists of two uprights and three chests. R. C. Connell, vice president of sales, told the distributors that "Norge will make its first real big play for freezer sales in '55."

The four electric and six gas ranges feature extra large ovens for the homemaker who bakes for the freezer as well as for the table. The ranges are split evenly between 30 and 36-in. widths.

Conventional washers with yellow porcelain exteriors; automatic electric and gas water heaters, many with glass lined tanks; an automatic dryer; and an automatic washer are also being produced by Norge this year.

Sayre told the 1,000 distributors present that Norge doubled its sales in 1954 and anticipates another 50% increase this year.

Robert J. Runge, director of advertising, announced that Norge has budgeted \$4,100,000 for advertising to push its lines. This is exclusive of cooperative funds.

Connell, vice president of sales, reported that the Borg-Warner Acceptance Corp. will institute consumer financing of Norge appliances in six southwestern states and may expand the service to other areas if and when the need arises.

He disclosed that a branch of the financing subsidiary is being established in Dallas to cover Texas, Louisiana, Mississippi, Arkansas, Tennessee, and part of Oklahoma. Financing is expected to begin Feb. 15. William Freytag, formerly branch manager for Refrigeration Discount Corp. in Newark, N. J., will head the Dallas office.

Sayre told the distributors that

the new 2% profit plan applies to all appliances, regardless of quantity or model. He called the plan a "bold, revolutionary \$2,000,000 move to increase the net profit of Norge appliance dealers."

He emphasized that dealer discounts would not be shortened. "As a matter of fact," he stated flatly, "in some cases dealer discounts will be greater."

"The extra profit that we pay our dealers will come out of the savings that we make by cutting the factory overhead rate during the six-month period," he added.

Norge's new two-door Customatic refrigerator offers a completely separate zero-temperature freezer compartment with a storage capacity of 124 lbs. of frozen food and is claimed to be the largest combination on the market in its price bracket. Refrigerator shelf area is 17.26 sq. ft.

The freezer section has an adjustable shelf and a "Handidor" for storage of frozen juices and frozen food packages. In the door of the refrigerator section are Handidor compartments for the storage of butter and cheese and an egg nest for two dozen eggs.

The Customatic refrigeration system has a "Weath-R-Gard" control which maintains a balanced refrigerator temperature.

The line also includes 12 and 9.56-cu. ft. single-door Customatic refrigerator-freezers, a 9.8-cu. ft. "Jet-D-Frost" refrigerator, and 8.1 and 9.8-cu. ft. manual defrost refrigerators.

Single-door upright freezers have 13.2 and 16.6 cu. ft. net capacities. Chest-type freezers are in 10, 15, and 20-cu. ft. sizes. All models have auto-type key locks to protect food supplies.

More than 4 cu. ft. of space is provided in the 24½-in. wide oven in Norge's new 30-in. ranges.

ELECTRIC RANGES

Model No.	Width	Suggested Retail Price
E-3010	30 in.	\$189.95
E-3020	30 in.	239.95
E-3610	36 in.	199.95
E-3620	36 in.	259.95

REFRIGERATORS

Model No.	Cap. (NEMA)	Freezer	Sug. List Price
		Chest	
D-8145*	8.1	46	\$199.95
D-1055*	9.8	55	269.95
J-1055†	9.8	60	299.95
C-1060‡	9.56	60	369.95
C-1280‡	12	80	429.95
TDC-13124§	13	124	529.95

*Manual defrost.

†Jet-D-Frost.

‡Customatic.

§Two-door Customatic.

FREEZERS

Model No.	Capacity Cu. Ft.	Suggested Retail Price
VF-1255*	13.21	\$399.95
VF-175*	16.64	499.95
F-105†	10	359.95
F-155†	15	459.95
F-205†	20	539.95

*Upright.

†Chest.

NARDA Speakers Paint Bright Future--

(Concluded from Page 1, Col. 3)

beginning of dealers' stripping off their handicaps of overburdensome expenses, in effectual personnel, inadequate financing and business controls, and lack of a planned, consistent, and hard-hitting merchandising program has definitely evidenced itself.

"We're on our way to success now—a way that was lost for awhile as we became confused by too many doctrines, lured by incentives which were sometimes placed ahead of a healthy organization showing a sound profit."

Carl O. Hagstrom, San Francisco, and Don Gabbert, Minneapolis, were re-elected vice presidents. Emerson Dole, Wichita, Kan., was elected as the third vice president.

Elected to succeed Ken Stucky, Fort Wayne, Ind., as treasurer was Victor P. Joerndt, Kenosha, Wis., formerly NARDA secretary. John K. Mooney, Marion, Ind., was named to the latter post. Mort Farr, Upper Darby, Pa., was re-elected chairman of the board.

Delivering the keynote address, D. A. Packard, general sales manager, Kelvinator Div., American Motors Corp., noted that economists say better over-all business conditions can be expected in 1955.

BUILDING BOOM

In addition, he said, an upturn in the rate of new family formation should begin this year and a continuation of the current boom in new home construction is forecast. These two factors, he pointed out, directly affect the appliance industry.

Add to these factors the things manufacturers have done to obsolete previous product models, and the appliance industry can lead the general business upswing this year, Packard declared. He cautioned, however, that appliance merchandising can be expected to continue "intensely competitive."

The Kelvinator executive also discussed the discount house problem. He said his company has studied the trend "literally inch by inch in the hopes that we could find a practical solution to the problems this type of selling has brought to conventional retailers."

DISCOUNT HOUSES SEEN HAVING LITTLE PERMANENT EFFECT

But as of now, he said, "we still do not see what the lasting effects of this trend will be on the over-all retailing structure in our industry."

In this connection, Packard recalled the dire predictions that were made about the end of the appliance retailer when department and furniture stores entered the retail appliance field in the early 1930's, bringing a new and more liberal term structure, and when a few years later mail order concerns offered appliances at \$40 to \$60 under existing price structures.

Actually, he said, appliance retailers emerged from these competitive conditions stronger and with a larger per cent of industry volume than they had had before.

"Just as the appliance retailer met the challenge of these two revolutions in merchandising methods in our industry in the past, so, too, do we expect that he will meet the challenge of today," Packard asserted.

CREATIVE SELLING CAN BEAT COMPETITION

Packard cited several Kelvinator activities during 1954 to prove his statement that retailers who apply creative selling methods can successfully compete under today's conditions.

Two dealers, among others, also offered some suggestions on the discount-house problem.

Declaring that "we are going to have to live with off-list price competition for a long time to

come," George Johnston, president, Johnston's, Inc., Minneapolis, said dealers must have a valuable, personalized "List Price Package" to sell as a substitute for a discount.

Johnston said this package should include a "prestige" product, a complete trade-in program enthusiastically promoted, one's own service shop and credit and collection service, and a policy of guaranteeing customer satisfaction.

George J. Pazik, Pazik Appliances, Milwaukee, urged the dealers to sell complete kitchens. Those who don't, he claimed, "are refusing to accept the best profit opportunity you have."

He added: "That is not all . . . You're ignoring the future, a very near future. . . I'm talking about built-ins. . . Manufacturers are making built-ins because the public wants them."

Pazik said selling kitchens is the "answer to the discount."

Two luncheon speakers presented encouraging views on the future of the industry. They were James P. Carmine, president of Philco Corp., and George H. Meilinger, appliance sales manager, Westinghouse Electric Corp.

Stating that prospects for the new year look good, Carmine emphasized that creative selling is more vital today than ever before. He predicted that this year will see the "full bloom of selling and merchandising."

'REFRIGERATORS WITHOUT MOTORS' FOR FUTURE

Discussing new products, Carmine told the dealers: "Some day you're going to sell refrigerators without motors."

Meilinger said the electric appliance industry will sell 428 million appliances in the next five years "if our industry really solves the adequate wiring problem and if we re-emphasize the fundamentals of good specialty selling."

He pointed out that there are three things retailers can do that will add up to adequate selling: Really represent their manufacturer; stress creative selling; and "use each sale you make as a springboard for repeat sales."

The suggestion that manufacturers should eliminate price from national advertising was made during a panel discussion on advertising and sales promotion moderated by Kenneth G. Gillespie, vice president and general manager, Jenkins Music Co., Kansas City.

Gillespie said the retail salesman is the decisive element in the customer's selection of a product. But, he asserted, "the average retail salesman has been completely 'brainwashed' with the idea that

price and discount are the only factors which count today."

"He sees nothing and hears nothing from customers and competitors but price. When he reads national ads on the products he sells, listens to radio programs, and sees television programs—in most cases he sees and hears nothing but price."

After referring to advertising of air conditioning and television and contrasting that with automobile manufacturers' advertising, Gillespie said:

"Unfortunately, with the great number of various models in lines we sell, our customers are pre-sold and thoroughly convinced that there is no need to look at anything beyond the lowest-priced model in the line."

W. B. VEAL HONORED

Some 600 persons attended the annual banquet—the largest attendance ever at this event. They saw W. B. Veal of Wallace Johnston Appliances, Inc., Memphis, Tenn., receive a \$500 cash prize for being chosen the retail appliance salesman of the year.

The award was presented for the *Ladies Home Journal* by Georges Birgy, appliance merchandising manager of the magazine. This is the first year the award has been given. It will be an annual event.

During the convention, several directors were elected.

Elected for three-year terms were Lloyd Bell, West Palm Beach, Fla.; R. D. O'Callaghan, Des Moines, Iowa; Charles Jett, Lexington, Ky.; Gross Williams, Jr., Shreveport, La.; Joseph Fleischaker, Louisville, Ky.; Emerson Dole, Wichita, Kan.; and Ken Stucky, Fort Wayne, Ind.

George Pazik, Milwaukee, was elected for a two-year term and Paul Dettling, Jackson, Mich., for a one-year term. Also, Sam Hagy of Dallas was chosen to fill the unexpired term of Vergal Bourland, Fort Worth, Texas, and Tom Carmichael of Seattle was elected to fill the unexpired term of Keith Davis, also of Seattle.

Adding considerable interest to the convention was the appearance of Miss America (Lee Ann Merriweather) and Miss Pennsylvania (Barbara Sue Nager). The former attended a luncheon session and the latter handed out merit awards at the banquet.

At the close of the convention, President Price announced that if enough members showed a firm interest, NARDA would arrange for a six-day university course in basic management for dealers.

Price said that if such a course was successful, he believed other segments of the industry (utilities, manufacturers, etc.) would subsidize future schools, perhaps on a fund basis.

Biggest Bargain Ever Offered TO OUR BIG INDUSTRY

Every phase of air conditioning and refrigeration selling—store layout, and display, financing, inexpensive advertising, dealing with manufacturers and distributors, selecting and getting the most out of salesmen, outwitting competition, making a profit on trade-ins and service, etc., etc.—covered completely in a 638-page encyclopedia:

"BOTH FEET ON THE GROUND"

by GEORGE F. TAUBENECK

This book wasn't dreamed up—it was lived. Consists almost entirely of "case histories" drawn from interviews with dealers all over the country. All your questions answered by successful appliance merchandisers who have worked them out in practice. Profit from the other fellow's experience!

Price \$5.95—ORDER FROM

CONJURE HOUSE DIVISION

Business News Publishing Co.

450 WEST FORT ST., DETROIT 26, MICH.

Please send a copy of Both Feet on the Ground.

☐ \$5.95 enclosed ☐ Send bill

Name

Address

1-17-55

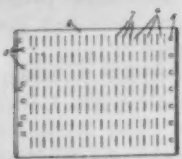
IDEAL
Speed-Freeze
PRODUCTS

BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS.
(With Refrigerated Faucets)

WRITE
IDEAL COOLER CORPORATION
3933 EASTON AVE. • ST. LOUIS 6, MO.

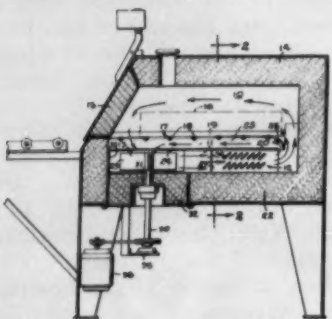
PATENTS Week of September 14

2,688,794. METHOD OF MAKING HEAT EXCHANGE APPARATUS. Harry S. Mautlich, Erie, Pa., assignor to General Electric Co., a corporation of New York.



1. The method of making a heat exchange apparatus for refrigerators and the like comprising the steps of providing a sheet of heat conducting material and continuous preformed serpentine tubing having a plurality of parallel passages, forming a plurality of rows of parallel strap-like members on said sheet, said members being formed from said sheet and being raised from the plane of said sheet so as to form rows of aligned unobstructed openings between said members and said sheet sufficiently wide to accommodate at least two passes of said tubing, inserting said tubing into said rows of aligned unobstructed openings between said members and said sheet, and thereafter depressing back into the plane of said sheet the portions of said members extending between said passes so as to wrap the remaining portions of said members tightly around at least half the circumference of the adjacent portions of said tubing, whereby said tubing is held in intimate thermal contact with said members and said sheet over a substantial area thereof.

2,688,806. CONDITIONING APPARATUS. Harold N. Ipsen, Rockford, Ill.

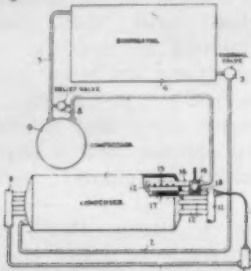


In a conditioning apparatus, the combination of an enclosure having top, bottom, side and end walls defining a chamber, a vertical shaft projecting through said bottom wall and into said chamber adjacent a first one of said end walls, an impeller comprising a plurality of angularly spaced vanes disposed close to said bottom wall and projecting generally radially from the upper end portion of said shaft, a substantially impermeable partition disposed above said impeller and parallel to said bottom wall to cooperate with the bottom wall in defining a duct along which air leaving the periphery of the impeller is directed, said partition extending from side to side of said enclosure and from said first end wall to a point short of the second end wall to cooperate with said second end wall and define an opening in said partition above said impeller to permit the latter to draw air axially from said chamber, conditioning means disposed within said duct between said impeller and said outlet, a single open framework material supporting said partition spaced above and paralleling said partition and an elongated deflector horizontally disposed within said outlet between said second end wall and the adjacent end of said partition and extending transversely across substantially the full width of said chamber, said deflector having its lower edge adjacent the plane of said partition and curving upwardly and away from said second end wall generally to merge with said platform thereby to direct conditioned air both above and below the platform.

2,688,849. SAFETY CONTROL FOR WATER-COOLED REFRIGERATIVE SYSTEM. John M. Andrews, York, Pa., assignor to York Corp., York, Pa.

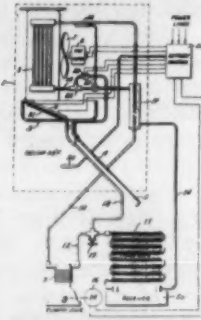
1. In a refrigerative circuit of the compressor-condenser-evaporator circuit type having a water-cooled surface condenser, and a thermostatically controlled regulating valve for varying the flow of cooling water through said condenser, the improvement which comprises means for directing at least a major portion of the hot gas entering the condenser against a minor portion of the water-cooled heat exchange surface of the condenser close

to the point of cooling water exit whereby a portion of the cooling water is intensively heated, the thermostatic element of said valve being located in the cooling



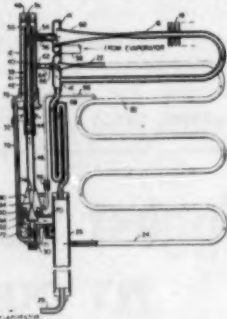
water near said minor portion of the heat exchange surface whereby it is subjected principally to heat exchange with the water so heated intensively.

2,688,850. REFRIGERATION SYSTEM OF DEFROSTING BY CONTROLLED FLOW OF GASEOUS REFRIGERANT. Causey L. White, Atlanta, Ga., assignor to Larkin Colls, Inc., Atlanta, Ga.



1. Refrigeration system for maintaining a refrigerated chamber at a temperature below 32° F., comprising means forming a refrigerated chamber, and within said chamber the following elements of said system, an evaporator, an pan for defrost water below said evaporator having a discharge opening, a drain pipe extending from said opening to a point without said chamber and a baffle in said pan beneath said evaporator sloping downward toward said discharge opening, a compressor, condenser, and receiver outside of said refrigerated chamber having the usual suction line from the low side of said compressor to the upper part of said evaporator, the hot gas line from the high side of said compressor to said condenser and the liquid line from said receiver to the lower part of said evaporator including an expansion valve adjacent said evaporator, means for defrosting said evaporator by hot gaseous refrigerant comprising a conduit connection from said hot gas line to the lower part of said evaporator, said conduit connection being in heat exchange proximity to said drain pipe, a normally closed valve controlling the passage of hot gaseous refrigerant through said conduit connection, an electric heater for heating said baffle, timer controlled means for periodically opening said valve and activating said heater, and means providing a fixed orifice in said conduit connection so calibrated with respect to the capacity of the system with which it is employed as to limit the rate of flow of hot gaseous refrigerant to said evaporator to the extent that it cannot condense in sufficient quantity to slug over into said suction line or in greater amount than will be completely evaporated by the hot gas in said conduit connection while draining back within said connection.

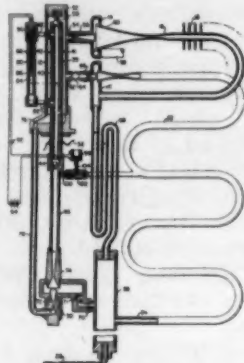
2,688,851. JET PUMP REFRIGERATION SYSTEM. Ernest P. Neumann and Ferdinand Lustwerk, Lincoln, Mass., assignors to Ultrasonic Corp., Cambridge, Mass.



1. In a refrigeration system including a boiler, a condenser, a jet pump con-

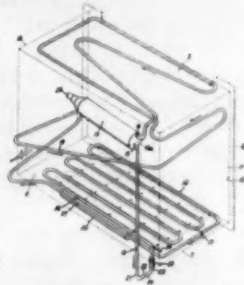
nected to said boiler and to said condenser, the combination of an injector having a throat portion, an orifice and a delivery tube, said injector being connected to pump liquid from said condenser into said boiler, an outlet port disposed in the throat portion of said injector, and a valve controlled conduit connecting said outlet port to said condenser.

2,688,852. JET PUMP REFRIGERATION SYSTEM. Ernest P. Neumann and Ferdinand Lustwerk, Lincoln, Mass., assignors to Ultrasonic Corp., Cambridge, Mass., a corporation of Massachusetts. Application Feb. 3, 1953, Serial No. 334,905. 3 Claims. (Cl. 68-117.65.)



1. In a refrigeration system including a boiler, a condenser, a jet pump connected to said boiler and to said condenser, the combination of an injector connected to the exhaust of said boiler and to said condenser, a conduit leading from the discharge end of said injector to said boiler, a valve controlled tube connecting said conduit to said condenser, and means responsive to the level of liquid in the boiler for controlling said valve.

2,688,855. EVAPORATOR CIRCUIT. Donald E. Hilliker and Stephen Balogh, Erie, Pa., assignors to General Electric Co., a corporation of New York. Application Sept. 27, 1952, Serial No. 311,876. 3 Claims. (Cl. 62-126.)



1. A flooded recirculating evaporator comprising a header and continuous tubing connected at both ends to said header, said tubing depending from said header, one end of said tubing being connected to said header below the level of liquid refrigerant therein, said one end including a vertical section for supplying liquid refrigerant from said header, the other end of said tubing being connected to said header above the level of liquid refrigerant in said header, said tubing being formed to provide a trap between said vertical section and the remainder of said tubing, said trap extending below said remainder of said tubing, a heater disposed in heat exchange relationship with a section of said remainder of said tubing, a check valve between said trap and said remainder of said tubing, said check valve including a hollow valve body having a valve seat in the lower portion thereof, and a ball valve within said valve body gravity-biased into engagement with said seat to block flow of refrigerant downwardly through said valve whereby surge of refrigerant upwardly in said vertical section toward said header is blocked.

2,688,878. LIQUID FLOW CHECK VALVE. Adolf von Wangenheim, Detroit, Mich., assignor to Detroit Controls Corp., a corporation of Michigan. Application June 20, 1950, Serial No. 169,196. 11 Claims. (Cl. 137-512.15.)



3. A liquid flow check valve comprising a body member having a concave wall portion comprised of elements of a cylinder, said wall portion having a pair of securing apertures therethrough positioned on the line of the element of greatest concavity of said wall portion and also having flow apertures therethrough on opposite sides of said line, a flexible valve member having a thin central portion and opposite peripheral thickened portions thickened transversely to the plane of said valve member and relative to said central portion and extending across said line, said valve member having a pair of boss members formed integral therewith and extending from one face thereof, said valve member and said peripheral portions being flexed and secured in substantially conforming relation to said wall portion by engagement of said boss members in said securing apertures, portions of said valve member being positioned in overlying relation to said flow apertures, said thickened portions being stressed by said boss members so as to urge the marginal portion of said valve member against said wall portion and said valve member into overlying closing relation to said flow apertures, said valve member being flexible away from said wall portion upon increased stressing of said thickened portions for flow through said flow apertures.

2,688,886. HEAT EXCHANGER. Charles J. O'Brien, Lockport, N. Y., assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Sept. 1, 1950, Serial No. 183,018. 3 Claims. (Cl. 139-38.)

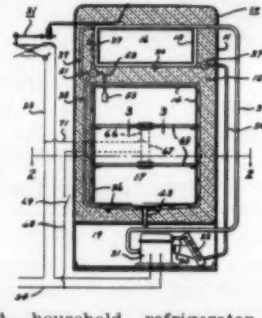
1. A heat exchange device comprising a tube having a fluid deflecting device extending throughout the length thereof and beyond the ends of said tube, said fluid deflecting device having laterally disposed linearly formed flanges projecting in opposite directions from opposite edges

thereof, a pair of oppositely disposed slits formed in said flanges beyond one end of said tube, said flanges being deflected outwardly beyond said slits to provide abutments adapted to engage seats at one end of said tube for preventing the movement of said device in said tube in one direction, an opening formed near the opposite end of said fluid deflect-



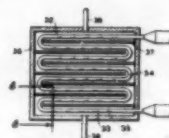
ing device and beyond the opposite end of said tube, and a wire projecting into said opening transversely of the wall of said tube at said opposite end for limiting the movement of said fluid deflecting device in the opposite direction within said tube.

2,688,110. HOUSEHOLD REFRIGERATOR WITH HUMIDITY CONTROL. George H. Strickland, Oakwood, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Oct. 19, 1949, Serial No. 122,221. 3 Claims. (Cl. 257-3.)



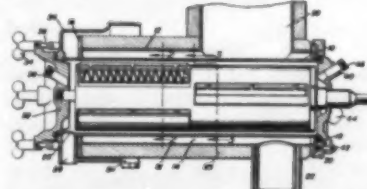
1. A household refrigerator cabinet comprising an insulated compartment for the reception and storage of perishable food products, means for cooling said compartment to a desired temperature range of approximately 40° to 50° F. for preserving the food products, said means including a single evaporator having a sufficient amount of cooling surface so that the temperature gradient between the compartment temperature and the cooling surface temperature is very small whereby to maintain a high percentage of humidity in the food storage compartment, means for removing excess humidity from said compartment without materially changing the compartment temperature, said last named means including heating means associated with the food storage compartment, means for energizing said heating means to add heat to said compartment, and means for simultaneously lowering the temperature of the cooling surface substantially below the normal temperature thereof to compensate for and to remove the added heat thereby to maintain the compartment temperature between said desired range, the said cooling surface at its lowered temperature condensing moisture thereon from the excess humidity within said food storage compartment.

2,688,112. COOLER FOR GASEOUS SUSPENSION OF A GRANULATED SOLID. Forrest E. Gilmore, Bartlesville, Okla., assignor to Phillips Petroleum Co., a corporation of Delaware. Application Aug. 30, 1949, Serial No. 113,036. 6 Claims. (Cl. 257-229.)



1. A heat exchange apparatus adapted to cool a gaseous suspension of a granular solid comprising a vessel having disposed therein a conduit of rectangular cross-section having a plurality of plait along its longitudinal axis and with the long side of said rectangular cross-section of said conduit perpendicular to a plane through the longitudinal axis of said plaited conduit, said plaited conduit having a cross-sectional area which decreases along the length of said conduit in direct proportion to the decrease in the absolute temperature of said suspension flowing therethrough whereby the velocity of said suspension is maintained substantially constant throughout the length of said conduit, the radius of curvature of the upturning sections of said plait being large enough to prevent particles from being thrown out of said suspension, said plaited conduit having disposed therein a plurality of fins along its inner bottom surface, each of said fins comprising a rectangle fastened along three of its sides to three sides of the said conduit and inclined in the direction of flow through said conduit, the majority of said fins being positioned near the point where a horizontal portion of said plait joins an upturning section of said plait, baffles disposed in said vessel to extend between the folds of each plait of said conduit whereby the coolant flowing through said vessel passes counter-currently to the flow of gaseous suspension through said conduit.

2,688,113. FREEZER CONVERTER. Casper W. Merrill, Logan, Utah. Application Nov. 7, 1952, Serial No. 319,290. 4 Claims. (Cl. 259-5.)

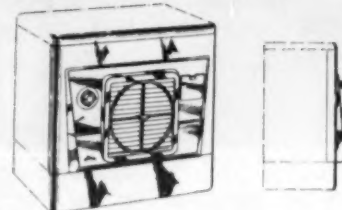


1. In a freezing apparatus having a freezing cylinder and having an inlet port to said cylinder for reception of fluid to be frozen and mixed, and having an out-

let port for discharge of the frozen product, a drum rotatably mounted in said cylinder, said drum substantially filling said cylinder, means mounted on said drum adjacent said inlet port for centrifugally urging said fluid against said cylinder, recesses in said drum, and blades rotatably mounted in said recesses, said blades having scraping contact with said cylinder when said drum is rotated, another recess in said drum offset from said first recited recesses, and a whipping element freely rotatably mounted in said another recess, said whipping element not engaging said cylinder.

DESIGNS

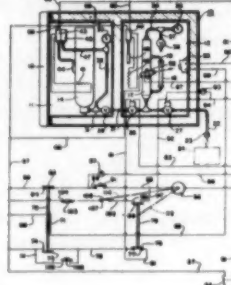
173,044. EVAPORATIVE COOLER FRONT OR SIMILAR ARTICLE. Norbert Shaeffer, Hollywood, Calif., assignor to Utility Appliance Corp., Los Angeles, Calif., a corporation of California. Application March 15, 1954, Serial No. 29,539. Term of patent 14 years. (Cl. D62-4.)



The ornamental design for an evaporative cooler front or similar article, substantially as shown and described.

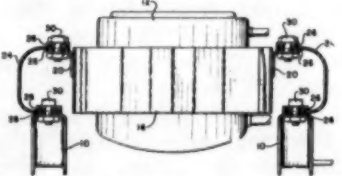
Week of September 21

2,689,463. CHARGING REFRIGERATING APPARATUS. Herman R. Ari, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Feb. 12, 1953, Serial No. 336,608. 10 Claims. (Cl. 62-2.)



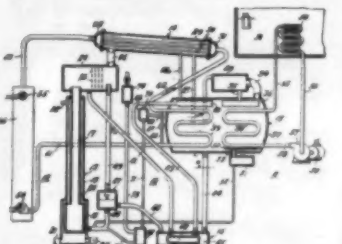
1. An apparatus for charging a predetermined amount of liquid of a volatile refrigerant fluid into a unit adapted to form a part of a closed refrigerating system comprising in combination, a tank containing a supply of volatile refrigerant, means for heating said tank to vaporize some of the volatile refrigerant therein and create a pressure in the tank adapted to force liquid refrigerant therefrom, a metering container having a conduit connection with said tank and a conduit connection with the unit to be charged, a first valve in the conduit between said tank and said container, a second valve in the conduit between said container and the unit, said first valve normally being open to permit liquid refrigerant to flow under said pressure from said tank into said metering container, said second valve normally being closed, a photo-cell device responsive to changes in liquid level within said container, said device being rendered effective automatically in response to a predetermined level of liquid refrigerant in said container for closing said normally open first valve, and means for opening said normally closed second valve to direct liquid refrigerant from said metering container into the unit.

2,689,464. REFRIGERATING APPARATUS MOUNTING MEANS. Clifford H. Wurtz, Oakwood, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application April 25, 1952, Serial No. 284,321. 3 Claims. (Cl. 62-116.)



1. In a refrigerator, a cabinet having a machinery compartment, a compressor within said machinery compartment, compressor mounting bracket means for supporting said compressor in said compartment, said mounting bracket means comprising a polystyrene plastic strap having glass fibers embedded therein and having the one end of the strap attached to said compressor and having its other end anchored in said compartment, said strap being relatively long and narrow so as to be able to absorb energy of the vibrations resulting from operation of the compressor.

2,689,465. EVAPORATOR AND ABSORBER UNIT FOR ABSORPTION REFRIGERATION SYSTEMS. Lowell McNeely, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application June 30, 1951, Serial No. 234,515. 8 Claims. (Cl. 62-119.)



1. In an absorption refrigeration system, a hermetically sealed shell enclosing both the evaporator and absorber at substantially the same level, said combined evaporator and absorber comprising a plurality of tubes in said shell and arranged

(Continued on next page)

Handy Way To Subscribe

Receive the greatest trade paper in the industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on air conditioning, commercial and industrial refrigeration, home freezers, and household refrigeration; manufacturing, contracting, distributing, retailing, and servicing. Only \$6.00 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ \$6 enclosed ☐ Bill me ☐ Bill the company

Name

Company

Street

City Zone State

My line of business is

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

DEPARTMENT OF DEFENSE			
Description	Quantity	Invitation No.	Opening Date
Purchasing and Contracting Office, Lake Charles Air Force Base, Lake Charles, Louisiana			
Installation of mechanical ventilating system in 20 administrative bldgs. at Lake Charles AFB, La. prof. Lecyatta.	Job	16-605-55-9B	10 Jan 55
Officer in Charge, Navy Purchasing Office, Washington, D. C.			
Ventilation fans vanexial and tubexial various types sizes and capacities with AC or DC motors and controllers per spec ships F-1784 dated 22 Nov 1954. Note quantity indicated is total of all types and sizes combined, the fans called for under this specification are of a type on the navy qualified product list.	3126	IFB-600-317-55-S	26 Jan 55
Supply and Fiscal Officer, U. S. Naval Station, Orange, Texas			
Refrigerator, electric, 6 cu. ft., right swing door hermetically sealed unit to operate on 110 V., 60 cycle, A.C. single phase.	25 ea.	IFB-61419-9-55	21 Jan 55
Refrigerator, electric, 6 cu. ft., left swing door hermetically sealed unit to operate on 110 V., 60 cycle, A.C. single phase.	25 ea.	IFB-61419-9-55	21 Jan 55
Chicago Quartermaster Depot, Quartermaster Purchasing Div., Chicago, Ill.			
Bid forms now available. Do not request after opening date.			
Refrigerator Box Portable Walk-in Plug in Type 150 Cu. Ft. Capacity Type II, Mil Spec. MIL-R-12571A: Domestic Pack 45 ea. 55-229B 10 Jan 55 Export Pack 16 ea. 55-229B 10 Jan 55			
Corps of Engineers, U. S. Army, Office of the Dist. Engineer, Washington Dist., 1st & Douglas Sts., N.W., Washington 25, D. C.			
Air conditioning ductwork at Fort Myer, Va. in building 214.	Job	ENG-49-080-55-38-(37)	12 Jan 55
Gadsden Air Force Depot, Gadsden, Alabama			
Directorate Procurement and Production: S/N 6750-470710 Indica- 151000 ea. 01-608-55-25-B 28 Jan 55 tor-Humidity Plug 5GM IAW Spec Mil P-6131(1) dt 5 Nov 52, type 1 and dwg AN4064-1 A body size 14MM Thd. Prime Class			
S/N 6750-471000 Indica- 1887300 ea. tor-Humidity Plug 5GM 18MM Thd Body sz IAW Spec Mil P-6131(1) dt 5 Nov 52, type 11 and dwg AN4062-11. Bid Sets applicable to the Air Force Procurements printed above are available at the above address. In addition, Bid Sets are available for EXAMINATION ONLY at Air Force district and subdistrict offices.			
Philadelphia District, Corps of Engineers, U. S. Army, 2635 Abbottsford Ave., Philadelphia 29, Pennsylvania			
Construction of additions to Job CIVENG-36-109-55-26 the heating, distribution system at Dover Air Force Base, Delaware.			11 Jan 55
Officer in Charge, Navy Purchasing Office, Washington, D. C.			
Frozen food cabinets, 16 cu. ft. capacity, 2 door, maximum dimensions, 50 in. wide by 24 1/2 in. deep by 72 in. high with 115-volt a.c. motors and controls.	48	(IFB-600-326-55-S)	8 Feb 55
Frozen food cabinets, 16 cu. ft. capacity, same as above except with 115-	7	(IFB-600-326-55-S)	8 Feb 55

volt d.c. motors and controls.

Frozen food cabinets, 8 cu. ft. capacity, 1 door, maximum dimensions 35 in. wide by 24 1/2 in. deep by 66 in. high with 115-volt a.c. motors and controls. Note: Above material per spec. MIL-R-1834B dated 2 July 1954 and Amendment No. 1 dated 8 Oct. 54.

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Region 5, 575 U. S. Courthouse, 219 S. Clark St., Chicago 4, Illinois			
Cincinnati, Ohio-1010 Broadway Bldg., Ventilation and Air Conditioning.	Job	C&R-497	17 Jan 55
General Services Administration, Business Service Center, 7th & D Street, Washington, D. C.			
Ice Plants.	2 ea.	(4N-34613-G-RR)	21 Jan 55
General Services Administration, Business Service Center, 620 Post Office & Courthouse, Boston 9, Mass.			
Furnish all Labor and Materials for Air Conditioning, Room 432 at Internal Revenue, T.T. Tremont St., Boston, Mass.	Job	(BOS-55-133)	20 Jan 55
Business Service Center, General Services Administration, Region VI, 50 Seventh St., N.E., Atlanta, Ga.			
Penthouse type ventilating fans, U.S. Post Office and Courthouse, Charlotte, N. C.	Job	CR4-909A	26 Jan 55
Business Service Center, General Services Administration, Region III, 7th and D Sts., S.W., Washington 25, D. C.			
Ice making machines.	2 ea.	4H-56104-R	28 Jan 55
Air conditioning units and cooling towers.	Indef.	4H-56042-R	28 Jan 55
Business Service Center, General Services Administration, 620 Post Office and Courthouse, Boston 9, Massachusetts			
Furnish all labor and materials for new exhaust fans, etc., at U. S. Army Recruiting Station, 96 Harlow St., Bangor, Maine.	Job	BOS-55-116	21 Jan 55

U. S. POST OFFICE DEPARTMENT

Chief of Procurement, Bureau of Facilities, Post Office Department, Washington, D. C.

Cooling tower, having a minimum capacity to cool 45 gpm from 95° F. with 85° F. with wet bulb temperature of entering air of 78° F. for use with air conditioning equipment at the Post Office, Washington, D. C. Delivered: On site, at Washington, D. C., ready to install, 10 days after receipt of order.

CONTRACTS AWARDED THROUGH JAN. 10

Signal Corps Supply Agency, 235 S. Eighteenth St., Philadelphia 3, Pennsylvania

Electrical type humidity indicating set, Contract No. 64574 PR&C No. 55-ELE/D-2206A.—1 ea., \$28,298.—Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave. S., Minneapolis, Minn.

Corps of Engineers, U. S. Army, Office of the District Engineer, Huntington Dist., 237 4th Ave., Huntington 18, W. Virginia

Construction of central heating plant addition, distribution lines, and auxiliaries at Lockbourne Air Force Base, Ohio (Inv., Ser. No. ENG-46-022-55-6).—Job, \$2,759,825.—Markowitz Bros., Inc., 5600 N.E. 4th Ave., Miami, Fla. Contractor advised that all work would be subcontracted.

HQ Air Research and Development Command, Baltimore 3, Md.

Research on heat transfer and mass transfer between a porous surface and an adjacent airstream.—Job, \$25,000.—The Regents of the University of Michigan, Ann Arbor, Michigan.

Contracting Office, Clovis Air Force Base, Clovis, N. M.

Remodel Bldg. T-957, install evapor cooling system, remove ADT system and reinstall and relocate radiators and furnish and install unit heaters (16B).—Job, \$17,420.—Plains Constr. Co., Box 863, Clovis, N. M.

Corps of Engineers, U. S. Army, Chicago Procurement Office, 226 W. Jackson Blvd., Chicago 6, Illinois

Heater, space, oil fired, 50,000 BTU per hour, F-151-B.—\$98 ea., \$38,508.—Lonergan Mfg. Co., 704 N. Clark St., Albion, Mich.

Mobile District, Corps of Engineers, 2301 Grant St., Mobile, Alabama

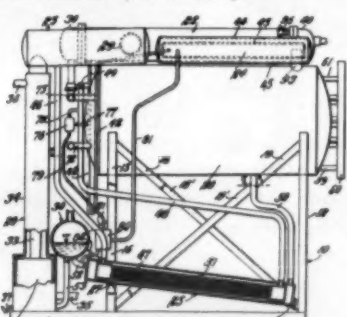
Construct heating mains to hospital at Brookley Air Force Base, Alabama (Inv. ENG-01-076-55-43).—Job, \$58,400.—Huffman-Wolfe Southern Corp., Mobile, Ala.

PATENTS

(Continued from preceding page)

ranged in vertical rows, said rows being in closely adjacent side-by-side relation and in open communication with each other, means to deliver liquid refrigerant onto the exterior of the uppermost tube of at least one row, means to deliver liquid absorbent onto the exterior of the uppermost tube of at least one of the other rows of tubes, the liquid dripping from each tube onto the next lowermost tube from the top to the bottom of its respective row, means for flowing a medium to be cooled through the interior of the row of tubes over which the liquid refrigerant is distributed, and means for flowing a cooling medium through the interior of a row of tubes over which the absorbent is distributed.

2,689,466. ABSORPTION REFRIGERATION UNIT WITH A CENTRIFUGAL SEPARATOR. Eugene P. Whitlow, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application June 30, 1951, Serial No. 234,525. 11 Claims. (Cl. 62-119.)

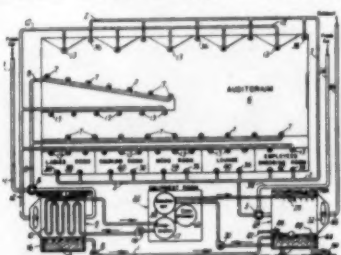


1. A self-contained vacuum type absorption refrigeration apparatus comprising a frame having a base and spaced upright stanchions, a shell mounted on the stanchions above the base and having an evaporator and absorber therein, a condenser mounted on the top of the shell, a generator mounted on the base and having a vapor liquid-lift projecting upwardly above the shell at one end thereof, a centrifugal separator having a horizontal casing connected between the upper end of the vapor liquid-lift and condenser with means therein for directing vapor in a helical path, a liquid heat exchanger mounted on the base of the frame below the shell, and conduits connecting the elements for the gravity flow of a refrigerant and absorbent raised by the vapor liquid-lift and providing columns

between the shell and liquid heat exchanger.

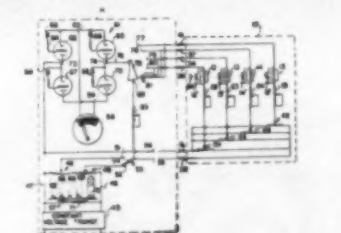
2,689,467. UTILIZATION OF MOISTURE FROM AIR FOR INDIRECT AIR CONDITIONING. Ludwig Verber, New York, N. Y. Application April 12, 1951, Serial No. 230,821. 2 Claims. (Cl. 62-140.)

1. An indirect air conditioning system for an enclosure of a public building where persons congregate comprising a refrigeration system of the compressor, condenser, evaporator type; a cooling, de-



moisting, and moisture-liquidizing chamber spaced from the evaporator and cooled indirectly therefrom and having a liquidate receiving sump; a duct for conducting conditioned air from the chamber to the enclosure; an evaporative psychro-aqua-factor removed from the condenser; means for conducting the liquidate from the sump to the psychro-aqua-factor; means for conducting water from the psychro-aqua-factor to the condenser and back to the psychro-aqua-factor; a fire-fighting reserve tank and means for conducting excess water from the psychro-aqua-factor to said fire-fighting reserve tank.

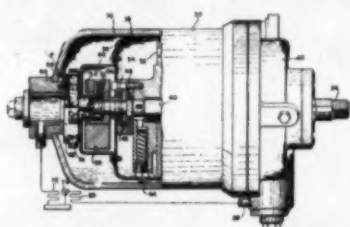
2,689,479. HUMIDITY MEASURING APPARATUS. Richard S. Feigl, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Nov. 28, 1950, Serial No. 198,000. 12 Claims. (Cl. 73-335.)



1. A condition responsive apparatus comprising a current measuring means; a source of current; and electric circuit means connected to said source and said measuring means, said circuit means including a plurality of condition responsive

impedance elements each having a relatively high ratio of impedance change to changes of the condition and having a relatively high range of impedance values under normal operating conditions and having a predetermined impedance value at about the midpoint of said range, a plurality of impedance means having a negligible response to said condition and each having an impedance predetermined value of a corresponding element, each of said impedance means being connected in series with an element to form a plurality of series connected matched impedances, and conductor means connecting said series connected matched impedances in parallel with each other and in series with said source and said measuring means.

2,689,522. REFRIGERATING APPARATUS. Anton M. Schaffer, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application May 19, 1952, Serial No. 288,601. 2 Claims. (Cl. 183-36.)

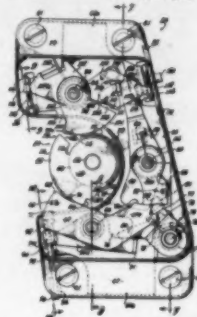


2. A compressor including a casing having an inlet and an outlet for gaseous refrigerant, a compressing means having its inlet connected to the inlet in said casing and having its outlet discharging into the interior of said casing, the interior of said casing forming a lubricant reservoir, a rotatable means connected to and rotated coincidentally to the operation of said compressing means, said rotatable means including a rotatable cup shaped portion having its rim extending around the outlet of said casing for shielding said outlet and preventing the direct flow of refrigerant into said outlet, the cylindrical part of said cup shaped portion having apertures therein through which the refrigerant flows to said outlet and deflectors from each leading edge in a trailing direction over each of said apertures to deflect lubricant from entering said apertures, and shielding means for substantially closing all entrances to the interior of said rotatable means except through said apertures.

2,689,759. DOOR LATCHING MECHANISM. Waldemar A. Endter, Long Beach, Calif. Application April 9, 1951, Serial No. 213,937. 17 Claims. (Cl. 292-219.)

1. A latch device comprising a holding mechanism to be carried by a first member and comprising a bolt movable be-

tween latched and unlatched positions, retaining means releasably maintaining said bolt in latched position, a cam movable in take-up and anti-take-up directions and positioned in spaced relation to said bolt, means for releasing said hold-



ing means; and a keeper structure to be carried by a second member movable relative to said first member and positioned for reception in dove-tail relation between and in engagement with said cam and bolt, said keeper structure comprising a pivotally movable latching keeper element deflectible by engagement with a forward face of the bolt as one of said members moves relative to the other to override the bolt and then engage a rear face of the bolt, said cam having a surface progressively bearing against said keeper structure upon movement of the cam in said take-up direction, said cam being positioned in the path of said keeper element at a location to be displaced thereby in anti-take-up direction upon such deflection of the keeper element by the bolt and to be held in displaced position during said overriding of the bolt by the keeper element, and said cam then moving in said take-up direction to exert against the keeper structure a thrust tending to urge said holding mechanism and

said keeper structure relatively together in a final closing movement, said keeper element having a shoulder engageable with a shoulder on the cam to displace the cam in said anti-take-up direction.

2,689,778. REFRIGERATOR SHELF MOUNTING STRUCTURE. Worthy L. Chambers, Chicago, and Joseph H. Konefes, Libertyville, Ill., assignors to Motor Products Corp., Detroit, Mich., a corporation of New York. Application April 16, 1951, Serial No. 221,238. 9 Claims. (Cl. 312-351.)



1. In a refrigerator, a cabinet having a storage compartment and having an access opening registering with the storage compartment, a panel member extending transversely of the storage compartment, a retainer rail member carried by the panel member and extending along one marginal edge of the panel member, said retainer rail member having vertically spaced resilient flanges respectively engaging opposite sides of the panel member adjacent said marginal edge and frictionally gripping the panel member to secure the retainer rail member in assembled relationship with the panel member, a rib on one of the members extending in the direction of length of the retainer rail member and engageable in a groove in the other of said members to hold the latter against relative lateral shifting movement, a container guide rail forming a seat for the retainer rail and secured to the adjacent wall of the cabinet beneath the retainer rail, and cooperating interengaging means on the rails releasable upon lifting the panel together with the retainer rail relative to the guide rail.

SALES ENGINEER WANTED

Nationally-known manufacturer of condensing units, packaged air conditioning, and residential heating and cooling units. Permanent position, salary, expenses, commission and car. Must be willing to travel. Dealer contact in Texas, Oklahoma. Experience in this field desired. State age, education, past connections in first letter. All of our employees know of this ad.

BOX A5145, AIR CONDITIONING & REFRIGERATION NEWS

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

DIRECT MAIL specialist. Available on consulting basis to manufacturer interested in developing volume leads at consumer level. Successful background in direct mail advertising. Has received national recognition with "Best of Industry" award winning campaigns in air conditioning and heating fields. Write DALTON P. FOX, 8864 Marcellus Avenue, Detroit 24, Michigan.

SERVICE REPRESENTATIVE. preferably with manufacturer. Service experience with residential and commercial Frigidaire service organization. Nine years' self-employed—past 6 years doing solely commercial and truck refrigeration. Am 31 years of age—married, with family—will travel in midwest. BOX A5139, Air Conditioning & Refrigeration News.

ESTABLISHED MANUFACTURER'S representative in the heating, ventilating, and air conditioning field is anxious to make a connection with a manufacturer of a quality line of power roof ventilators. I am attending the Philadelphia show. BOX A5140, Air Conditioning & Refrigeration News.

INSTALLATION AND service, air conditioning and heating. Twenty years in the industry, at present with leading factory. Can formulate policies and coordinate erection and service activity. Seeking greater opportunity. Want permanent position with distributor or contractor. Midwestern states preferred, age 41, married, will relocate. BOX A5143, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

FACTORY REPRESENTATIVES. The following states have been opened and have active accounts - Wisconsin - Iowa - Minnesota - Nebraska - No. & So. Dakota - Montana - Wyoming - Colorado - New Mexico - Arizona - Utah - Nevada - Southern California - Texas - Kansas - Missouri - Arkansas - Louisiana. Most complete line in the industry featuring restaurant and food market display and storage refrigerators - walk-in coolers - kitchen, hospital and institutional refrigerator - self-service display and storage freezers with automatic defrost. Modern line of all steel sectional display shelving and gondolas. Only qualified representatives in one or more fields will be considered. Our company a pioneer in the industry since 1899. Send your resume in confidence to PRESIDENT, FOGEL REFRIGERATOR COMPANY, 5400 Eadom Street, Philadelphia 37, Pennsylvania.

WANTED—MANUFACTURERS' representatives now contacting commercial refrigeration dealers in the following territories: Chicago, Atlanta, Detroit & Florida. Must be able to sell quality equipment: fast-growing line of special commercial refrigeration items of interest to established refrigeration dealers. Replies confidential. Write: Paul R. Stewart, C. SCHMIDT COMPANY, 1713 John Street, Cincinnati 14, Ohio.

COMMERCIAL REFRIGERATION and air conditioning firm in northern N. J. established 21 years, wants experienced, energetic man to supervise and sell nationally known commercial refrigeration and air conditioning equipment. Opportunity for well paying permanent future with partial equity. Good salary and override. Sales \$350,000 annually. Owner anxious to retire. Write full particulars BOX A5138, Air Conditioning & Refrigeration News.

ENGINEER—CAPABLE of assuming responsibility for Sales Application Department. Qualified to manage Engineering Department, assuming complete responsibility for engineer of applied equipment through one-hundred tons. Prefer man with Carrier background and experience, and one with field experience who has followed this type of work for at least five years. Company has been Carrier distributor for past twenty years. Reply BOX A5138, Air Conditioning & Refrigeration News.

SERVICE MANAGER for air conditioning department, must be capable of complete management including field supervision, maintenance contracts, north side of Chicago. Our employees know of this ad. State past employers, salary expected. BOX A5141, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE wanted. An experienced commercial refrigeration salesman is needed by a large manufacturer of refrigerated and non-refrigerated store equipment to represent the factory in a protected territory. Salary and commission, plus expenses. Please give full particulars in first letter, including date of availability. Replies will be held in strict confidence. BOX A5142, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

SIX (6) used Dole freezer plate banks, 12 ft. long. Seven plates per bank, each 12" high. Priced at \$35.00 per bank, uncrated. F.O.B. Fort Wayne, Indiana. RHOADS EQUIPMENT CO., 3232 S. Calhoun St., Fort Wayne, Indiana.

ATTENTION SERVICEMEN: Save 25 to 50% on your refrigeration parts. Send for our catalog of values today. Here is only one of our money saving offers. 1 1/2" O.D. copper connections x 14 1/2" overall vibration eliminators, \$4.65 each. Lot of 10, \$40.00 each. WALTER W. STARR REFRIGERATION SUPPLIES, 2833 Lincoln Avenue, Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

ESTABLISHED 20 years. Commercial refrigeration and air conditioning sales-service business and building for sale in prosperous midwest city of over 70,000. Good reputation, modern well-equipped shop. Ideal partnership set-up. Price under \$50,000 including large building with large apartment. Terms. Inquire BOX A5144, Air Conditioning & Refrigeration News.

Tecumseh Line--

(Concluded from Page 1, Col. 4)
ic compressor for year-round residential air conditioning applications. The Tecumseh model FB500 is a 4-cylinder compressor with a displacement of 13.8. By a simple change of electrical components this model may be used on either air-cooled or water-cooled applications. It is a spring-mounted compressor with a diameter of approximately 14½ in.

Charged with "Freon-22" it will deliver full rated tonnage and under air-cooled conditions of 45° F. evaporator temperature, 95° ambient, and 300 lbs. head pressure, 77 lbs. suction pressure, will produce 60,000 B.t.u. per hour, according to the company. Both single and three-phase 220-volt electrical systems are available and crankshafts are grooved to rotate in either direction.

The new models for year-round systems in the 1½-hp. to 3-hp. range include 1½-hp. models JA150 and JB150; 2-hp. models JB200 and JE200; and the 3-hp. model JE300. Models JB150 and JE200 are charged with "Freon-12" and the rest are charged with "Freon-22."

CAN BE USED WITH AIR OR WATER-COOLED CONDENSERS

All models are designed so that they may be used with either air or water-cooled condensers by a simple change of electrical components. Single and three-phase, 208-volt or 230-volt systems are available for all models.

These new models incorporate the twin-cylinder 180° opposed design and include many new features. Large oil reservoirs assure proper lubrication at all times. Crankshafts have oil grooves to allow rotation in either direction for three-phase operation. A new muffler design reduces sound level to a minimum. Valves and tubes are provided on most models to allow flexibility of installation.

Capacities of the "F-22" models under the conditions for air-cooled units described previously are as follows: JA150—18,500; JB200—24,000; JE300—36,000.

The two air-cooled highsides are in 2 and 3-hp. models JB200 HT and JE300 HT. For easier installation, all wiring has been included in a control panel which includes the high-low pressure control, contractors, circuit breaker, and terminals for fan motor connections, evaporator blowers, ground and power connections.

All external wiring is enclosed in Underwriters' approved BX cable, and fan motors may be easily replaced. Bleeder valves are provided so that the complete charge will not be lost when changing the compressor. With the proper external weather protection, these units may be placed outside, in the garage.

FOR USE IN LARGER WINDOW UNITS, SMALL YEAR-ROUND SYSTEMS

Model B32P16 is a unit that has found increasing use in larger window coolers and also smaller year-round systems, say Tecumseh officials. The design used on this 1½-hp. model has been utilized for an "economy" 2-hp. model by increasing the bore and using a larger model. This model B74T16 is for those requiring more capacity than



NEW "J" MODEL Tecumseh hermetic compressor series is designed particularly for air conditioning applications, and are so designed that they can be used with either water-cooled or air-cooled condensers.



BRAND NEW TO THE Tecumseh line of compressors is this new 5-hp. full hermetic model. It is a 4-cylinder "Freon-22" model and is available with both single and three-phase 220-volt electrical systems.

the 1½-hp. model, but not as much as the 2-hp. JB200.

Tecumseh's standard ¾-hp. single-cylinder compressors, models S7R16 and S7N16 have been newly designed to comply with new codes and power factor requirements.

The new "J" model compressors replace Tecumseh's previous "H" model compressors in the same horsepower sizes. Major construction change is that the new "J" models will have two cylinders opposing each other 180° apart. The old "H" line had two cylinders but they were at a 90° angle to each other.

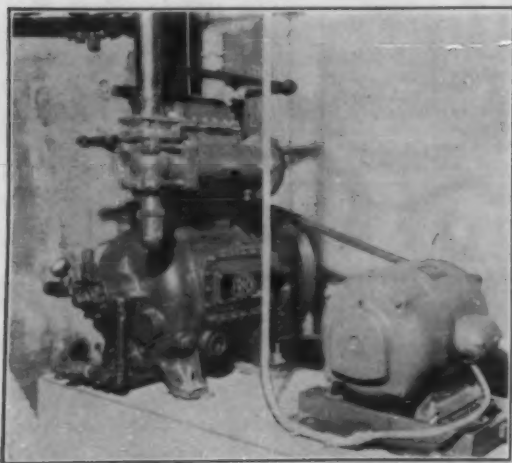
All crankshafts have been designed with oil grooves so that they will operate in either direction, making the entire line adaptable to three-phase current.

Warranty Costs--

(Concluded from Page 1, Col. 3)
tion then applied for a refund, claiming that even if the tax applied to the warranty charges, the cost of repairing refrigerators which were returned under the warranty constituted a legal "business expense" deduction for tax purposes.

When this plea was rejected GM filed suit to recover the money in the court of claims. The court held that while a warranty was taxable, GM was entitled to deduct costs, and made an award of \$240,000 to the corporation.

The government contends in its suit that the decision is so far-reaching it would deprive the U. S. treasury of large sums of money in the form of excise taxes, and refunds. For the last four years (years not barred by the statute of limitations) the government might have to refund an estimated \$100,000,000 to makers of items subject to excises, it was said.



Compressors

The industry's most complete line: 83 types and sizes—for Freon, ammonia and other refrigerants. Specify Frick, and you're sure of getting exactly the machine you need. Write for literature and estimates now.



Heating and Ventilating Show Program--

(Concluded from Page 1, Col. 5)

The exposition will be open from 2 to 10 p.m. on Monday; from 12 noon to 10 p.m. on Tuesday, Wednesday, and Thursday; and from noon to 6 p.m. on Friday. A special bus service will be provided to the Commercial Museum from downtown hotels.

Of the more than 400 exhibits which the exposition will house, many will display new models of package air conditioning equipment for commercial and residential applications, and the many components for such products.

Among the promised innovations are some new types of "wet" year-round air conditioning systems, "add-on" summer cooling units, and water saving devices.

With one exception all ASHAE events are scheduled for the Bellevue-Stratford hotel. A buffet supper and party Monday evening, Jan. 24, will be held in the ballroom of the Benjamin Franklin hotel.

A highlight of the ASHAE meeting will be the annual banquet Wednesday night, Jan. 26, the speaker being Dr. Milton Eisenhower, president of Pennsylvania State university and brother of President Eisenhower.

A considerable variety of topics is promised for the technical sessions, including one on the effect of weather conditions on a residential cooling system.

The complete program has been announced as follows:

MONDAY, JAN. 24

9 a.m.—Registration.

9:30 a.m.—First technical session, E. F. Snyder, Jr., chairman. "Ventilation Requirements for Removal of Tobacco Smoke," by C. P. Yaglou.

"A Rapid General Purpose Centrifuge Sedimentation Method for Measurement of Particle Size Distribution," by K. T. Whitby.

"Evaluation of Panel Type Air Cleaners by Means of Atmospheric Dust," by H. A. Endres, W. T. Van Orman, and R. P. Carter, Jr.

12:15 p.m.—Welcome luncheon.

6 p.m.—Delaware Valley, U.S.A. Frolic, buffet supper, show, dancing (at Benjamin Franklin hotel).

TUESDAY, JAN. 25

9 a.m.—Registration.

9:30 a.m.—Second technical session, R. S. Dill, chairman.

"Preliminary Studies of Heat Removal by Cooled Ceiling Panel," by L. F. Schutrum, John Vouris, and T. C. Min.

"Measurement of Angular Emissivity," by A. Umur, G. V. Parmelee, and L. F. Schutrum.

"Circuit Analysis Applied to Load Estimating, Phase II," by H. B. Nottage and G. V. Parmelee.

WEDNESDAY, JAN. 26

9 a.m.—Registration.

9:30 a.m.—Third technical ses-

sion, Prof. E. R. Queer, chairman.

"Gas Is an Important Factor in the Thermal Conductivity of Most Insulating Materials, Part II," by R. M. Lander.

"Selection of Outside Design Temperature for Heat Load Estimation," by M. L. Ghai and R. Sundaram.

"Study of Liquid-to-Liquid Heat Transfer in Hot Water Heaters," by F. W. Hutchinson, L. J. La Tart, and N. W. Smith.

"Cloudless Day Radiation," by R. C. Jordan and J. L. Threlkeld.

7 p.m.—Annual banquet, Dr. Milton Eisenhower, speaker.

THURSDAY, JAN. 27

9 a.m.—Registration.

9:30 a.m.—Fourth technical session, Prof. Linn Helander, chairman.

"Paths of Horizontally Projected Heated and Chilled Air Jets," by Alfred Koestel.


"Air Conditioning of Multi-Room Buildings," by R. W. Waterfall.

"Effects of Weather Conditions on Cooling Unit Operation in a Residence," by H. T. Gilkey and S. Konzo.

A. C. in Maumee

MAUMEE, Ohio—Ground has been broken for Lamson's Town & Country suburban store here which will be completely air conditioned. The store will measure 160 by 210 ft. George W. Lathrop & Sons of Toledo holds the construction contract.



The  dual-vector* offers clean, hot water heat in winter
...cool dehumidified air in summer

The UNARCO DUAL-VECTOR is a quality product newly designed to make economically feasible the combination of a fine hot water heating system and a chilled water cooling system.

Now you can have all the advantages of hot water heat—cleanliness...smooth, even heat...quiet operation—and in summer, cool, conditioned air. DUAL-VECTORS are used in a series, one-pipe or two-pipe system, providing forced hot water heat

or chilled water cooling using the same system.

What's more, the initial cost is often less than other combination systems which lack the acknowledged advantages of "wet" heat. And because each unit is individually controlled, you can heat or cool as few or as many rooms as desired. Thus the money saved in winter will help pay for your summer cooling comfort. Clip and send in coupon below for detailed information. *trade mark



DUAL-VECTORS are ideal for homes, apartments, hotels, motels, offices and institutional buildings.

HEATING & COOLING PRODUCTS

UNION ASBESTOS & RUBBER COMPANY
Dept. HC-100 F
332 S. Michigan Avenue, Chicago 4, Ill.

Name

Company

Address

City State